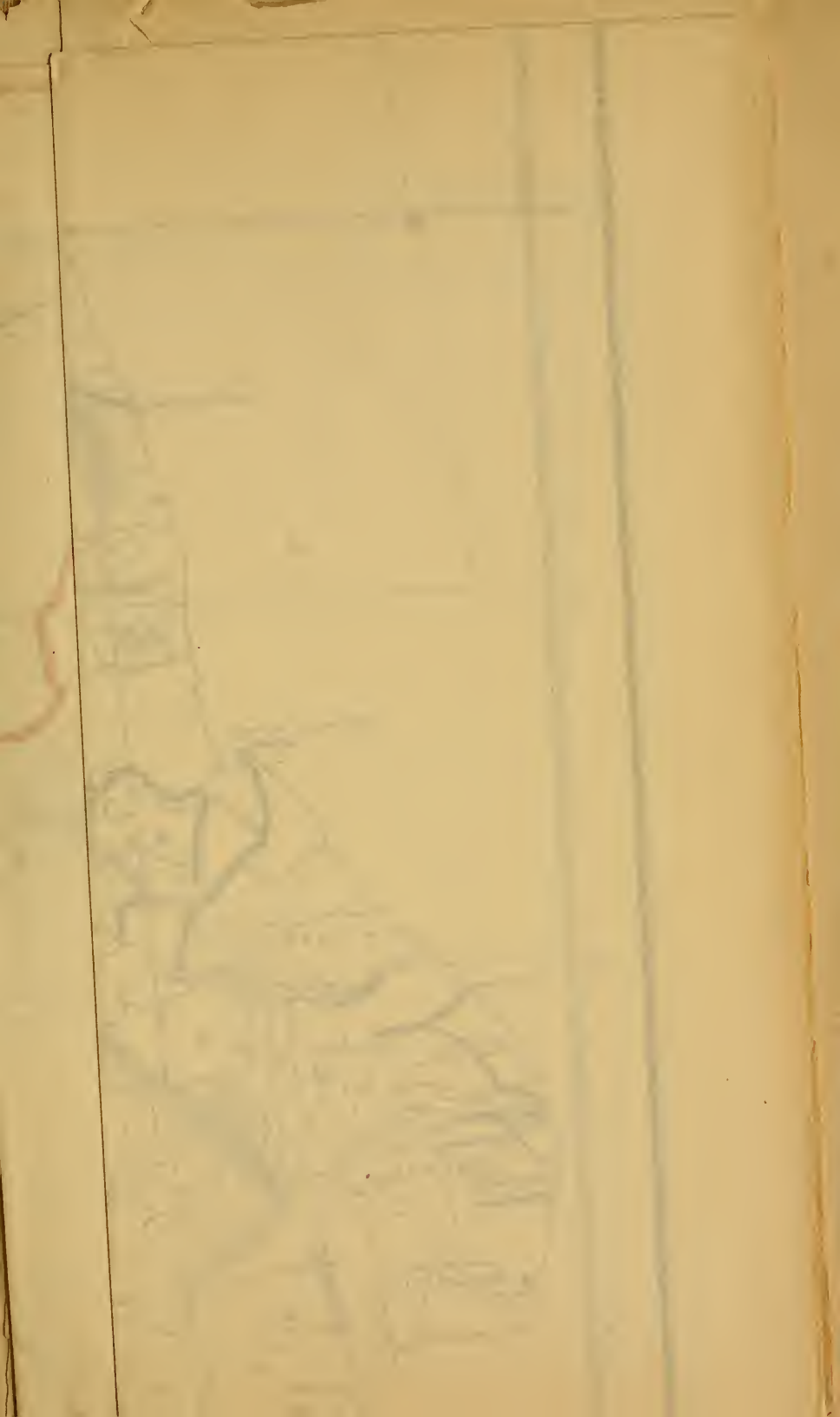




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To accompany the Report of the United States Delegation

SOUTH AMERICA

Scale: 1:1,000,000 (1 inch = 160 miles)

Legend:

- Proposed International Line
- Line
- Line of First Settlement or operation
- Boundary

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INTERNATIONAL AMERICAN CONFERENCE.

REPORTS AND RECOMMENDATIONS,

TOGETHER WITH

THE MESSAGES OF THE PRESIDENT AND THE LETTERS
OF THE SECRETARY OF STATE TRANSMITTING
THE SAME TO CONGRESS.

PLAN OF ARBITRATION.
RECIPROCITY TREATIES.
INTER-CONTINENTAL RAILWAY.
STEAM-SHIP COMMUNICATION.
SANITARY REGULATIONS.
CUSTOMS REGULATIONS.
COMMON SILVER COIN.
PATENTS AND TRADE-MARKS.

WEIGHTS AND MEASURES.
PORT DUES.
INTERNATIONAL LAW.
EXTRADITION TREATIES.
INTERNATIONAL BANK.
MEMORIAL TABLET.
COLOMBIAN EXPOSITION.

WASHINGTON:
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INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING A

PLAN OF ARBITRATION

FOR THE

SETTLEMENT OF DISPUTES BETWEEN THE
AMERICAN REPUBLICS.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

Reports adopted by the Conference of American Nations recently in session at Washington relating to the subject of international arbitration.

SEPTEMBER 3, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith a letter from the Secretary of State, which is accompanied by three reports adopted by the Conference of American Nations recently in session at Washington relating to the subject of international arbitration. The ratification of the treaties contemplated by these reports will constitute one of the happiest and most hopeful incidents in the history of the Western Hemisphere.

BENJ. HARRISON,

EXECUTIVE MANSION,
September 3, 1890.

DEPARTMENT OF STATE,
Washington, August 26, 1890.

The PRESIDENT :

The act of Congress approved May 24, 1888, authorized the President to invite the several other governments of America to join the United States in a conference "for the purpose of discussing and recommending for adoption some plan of arbitration for the settlement of disagreements and disputes that may hereafter arise between them." In pursuance of this invitation the Conference recently in session at this capital adopted three reports :

1. Recommending a definite plan of arbitration for the settlement of differences between the American nations.
2. Recommending the adoption of a similar plan by the nations of Europe.
3. Declaring that the right of conquest could not be recognized by the American nations.

I have the honor to inclose herewith copies of these reports for the information of Congress.

Respectfully submitted,

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONFERENCE.

CONFERENCIA INTERNACIONAL AMERICANA.

REPORTS OF THE COMMITTEE ON GENERAL WELFARE.

INFORMES DE LA COMISIÓN DE BIEN-ESTAR GENERAL.

[As adopted by the Conference.]

[Como quedaron adoptados por la Conferencia.]

I.—PLAN OF ARBITRATION.

I.—PLAN DE ARBITRARJE.

The Delegates from North, Central, and South America in Conference assembled:

Las Delegaciones de Norte, Centro y Sud América, reunidas en Conferencia Internacional Americana,

Believing that war is the most cruel, the most fruitless, and the most dangerous expedient for the settlement of international differences;

Creyendo que la guerra es el medio más cruel, el más incierto, el más ineficaz y el más peligroso para decidir las diferencias internacionales;

Recognizing that the growth of the moral principles which govern political societies has created an earnest desire in favor of the amicable adjustment of such differences;

Reconociendo que el desenvolvimiento de los principios morales que gobiernan las sociedades políticas, ha creado una verdadera aspiración en favor de la solución pacífica de aquellas disidencias;

Animated by the conviction of the great moral and material benefits that peace offers to mankind, and trusting that the existing conditions of the respective nations are especially propitious for the adoption of arbitration as a substitute for armed struggles;

Animadas por la idea de los grandes beneficios morales y materiales que la paz ofrece á la humanidad, y confiando en que la condición actual de sus respectivos países es especialmente propicia para la consagración del arbitraje en oposición á las luchas armadas:

Convinced by reason of their friendly and cordial meeting in the present Conference, that the American Republics, controlled alike by the principles, duties, and responsibilities of popular Government, and bound together by vast and increasing mutual interests, can, within the sphere of their own action, maintain the peace of the continent, and the good-will of all its inhabitants;

Convencidas, por su amistosa y cordial reunión en la presente Conferencia, de que las naciones americanas, regidas por los principios, deberes y responsabilidades del Gobierno democrático, y ligadas por comunes, vastos y crecientes intereses, pueden, dentro de la esfera de su propia acción, afirmar la paz del Continente y la buena voluntad de todos sus habitantes;

And considering it their duty to lend their assent to the lofty principles of peace which the most enlightened public sentiment of the world approves;

Y reputando de su deber prestar asentimiento á los altos principios de paz que proclama el sentimiento ilustrado de la opinión universal;

Do solemnly recommend all the Governments by which they are accredited to conclude a uniform treaty of arbitration in the articles following:

Encarecen á los Gobiernos que representan la celebración de un tratado uniforme de arbitraje sobre las bases siguientes:

ARTICLE I.

ARTÍCULO I.

The republics of North, Central, and South America hereby adopt arbitration as a principle of American international law for the settlement of the differences, disputes, or controversies that may arise between two or more of them.

Las Repúblicas del Norte, Centro y Sud América, adoptan el arbitraje como principio de Derecho Internacional Americano para la solución de las diferencias, disputas ó contiendas entre dos ó más de ellas.

ARTICLE II.

ARTÍCULO II.

Arbitration shall be obligatory in all controversies concerning diplomatic and consular privileges, boundaries, territories, indemnities, the right of navigation, and the validity, construction, and enforcement of treaties.

El arbitraje es obligatorio en todas las cuestiones sobre privilegios diplomáticos y consulares, límites, territorios, indemnizaciones, derechos de navegación, y validez, inteligencia y cumplimiento de tratados.

ARTICLE III.

Arbitration shall be equally obligatory in all cases other than those mentioned in the foregoing article, whatever may be their origin, nature, or object, with the single exception mentioned in the next following article.

ARTICLE IV.

The sole questions excepted from the provisions of the preceding articles are those which, in the judgment of any one of the nations involved in the controversy, may imperil its independence. In which case, for such nation, arbitration shall be optional; but it shall be obligatory upon the adversary power.

ARTICLE V.

All controversies or differences, whether pending or hereafter arising, shall be submitted to arbitration, even though they may have originated in occurrences antedating the present treaty.

ARTICLE VI.

No question shall be revived by virtue of this treaty concerning which a definite agreement shall already have been reached. In such cases arbitration shall be resorted to only for the settlement of questions concerning the validity, interpretation, or enforcement of such agreements.

ARTICLE VII.

The choice of arbitrators shall not be limited or confined to American States. Any government may serve in the capacity of arbitrator which maintains friendly relations with the nation opposed to the one selecting it. The office of arbitrator may also be intrusted to tribunals of justice, to scientific bodies, to public officials, or to private individuals, whether citizens or not of the States selecting them.

ARTICLE VIII.

The court of arbitration may consist of one or more persons. If of one person, he shall be selected jointly by the nations concerned. If of several persons, their selection may be jointly made by the nations concerned. Should no choice be agreed upon, each nation showing a distinct interest in the question at issue shall have the right to appoint one arbitrator on its own behalf.

ARTÍCULO III.

El arbitraje es igualmente obligatorio, con la limitación del artículo siguiente, en todas las demás cuestiones no enunciadas en el artículo anterior, cualesquiera que sean su causa, naturaleza ó objeto.

ARTÍCULO IV.

Se exceptúan únicamente de la disposición del artículo que precede, aquellas cuestiones que, á juicio exclusivo de alguna de las naciones interesadas en la contienda, comprometan su propia independencia. En este caso, el arbitraje será voluntario de parte de dicha nación, pero será obligatorio para la otra parte.

ARTÍCULO V.

Quedan comprendidas dentro del arbitraje las cuestiones pendientes en la actualidad, y todas las que se susciten en adelante, aún cuando provengan de hechos anteriores al presente Tratado.

ARTÍCULO VI.

No pueden renovarse, en virtud de este Tratado, las cuestiones sobre que las partes tengan celebrados ya arreglos definitivos. En tales casos, el arbitraje se limitará exclusivamente á las cuestiones que se susciten sobre validez, inteligencia y cumplimiento de dichos arreglos.

ARTÍCULO VII.

La elección de árbitros no reconoce límites ni preferencias. El cargo de árbitro no reconoce límites ni preferencias. El cargo de árbitro puede recaer, en consecuencia, sobre cualquiera Gobierno que mantenga buenas relaciones con la parte contraria de la nación que lo escoja. Las funciones arbitrales pueden también ser confiadas á los Tribunales de justicia, á las corporaciones científicas, á los funcionarios públicos, y á los simples particulares, sean ó no ciudadanos del Estado que los nombre.

ARTÍCULO VIII.

El tribunal puede ser unipersonal ó colectivo. Para que sea unipersonal, es necesario que las partes elijan el árbitro de común acuerdo. Si fuere colectivo, las partes podrán convenir en unos mismos árbitros. A falta de acuerdo, cada nación que represente un interés distinto, tendrá derecho de nombrar un árbitro por su parte.

ARTICLE IX.

Whenever the court shall consist of an even number of arbitrators, the nations concerned shall appoint an umpire, who shall decide all questions upon which the arbitrators may disagree. If the nations interested fail to agree in the selection of an umpire, such umpire shall be selected by the arbitrators already appointed.

ARTICLE X.

The appointment of an umpire, and his acceptance, shall take place before the arbitrators enter upon the hearing of the questions in dispute.

ARTICLE XI.

The umpire shall not act as a member of the court, but his duties and powers shall be limited to the decision of questions, whether principal or incidental, upon which the arbitrators shall be unable to agree.

ARTICLE XII.

Should an arbitrator or an umpire be prevented from serving by reason of death, resignation, or other cause, such arbitrator or umpire shall be replaced by a substitute to be selected in the same manner in which the original arbitrator or umpire shall have been chosen.

ARTICLE XIII.

The court shall hold its sessions at such place as the parties in interest may agree upon, and in case of disagreement or failure to name a place the court itself may determine the location.

ARTICLE XIV.

When the court shall consist of several arbitrators, a majority of the whole number may act notwithstanding the absence or withdrawal of the minority. In such case the majority shall continue in the performance of their duties until they shall have reached a final determination of the questions submitted for their consideration.

ARTICLE XV.

The decision of a majority of the whole number of arbitrators shall be final both on the main and incidental issues, unless in the agreement to arbitrate it shall have been expressly provided that unanimity is essential.

ARTICLE XVI.

The general expenses of arbitration proceedings shall be paid in equal proportions by the governments that are parties

ARTÍCULO IX.

Siempre que el tribunal se componga de un número par de árbitros, las naciones interesadas designarán un árbitro tercero para decidir cualquiera discordia que ocurra entre ellos. Si las naciones interesadas no se pusieren de acuerdo en la elección del tercero, la harán los árbitros nombrados por ellas.

ARTÍCULO X.

La designación y aceptación del tercero se verificarán antes de que los árbitros principien á conocer del asunto sometido á su resolución.

ARTÍCULO XI.

El tercero no se reunirá con los árbitros para formar Tribunal, y su eucargo se limitará á decidir las discordias de aquellos, en lo principal y en los incidentes.

ARTÍCULO XII.

En caso de muerte, renuncia ó impedimento sobreveniente, los árbitros y el tercero serán reemplazados por otros nombrados por las mismas partes y del mismo modo que lo fueron aquellos.

ARTÍCULO XIII.

El Tribunal ejercerá sus funciones en el lugar designado pos las partes; y si ellas no lo designaren, ó no estuvieren de acuerdo, en el que el mismo Tribunal escogiere al efecto.

ARTÍCULO XIV.

Quando el Tribunal fuere colegiado, la acción de la mayoría absoluta no será paralizada ó restringida por la inasistencia ó retiro de la minoría. La mayoría deberá, por el contrario, llevar adelante sus procedimientos y resolver el asunto sometido á su consideración.

ARTÍCULO XV.

Las decisiones de la mayoría absoluta del Tribunal colectivo constituirán sentencia, así sobre los incidentes como sobre lo principal de la causa, salvo que el compromiso arbitral exigiere expresamente que el laudo sea pronunciado por unanimidad.

ARTÍCULO XVI.

Los gastos generales del arbitramento serán pagados á prorata entre las naciones que sean parte en el asunto. Los

thereto; but expenses incurred by either party in the preparation and prosecution of its case shall be defrayed by it individually.

ARTICLE XVII.

Whenever disputes arise the nations involved shall appoint courts of arbitration in accordance with the provisions of the preceding articles. Only by the mutual and free consent of all of such nations may those provisions be disregarded, and courts of arbitration appointed under different arrangements.

ARTICLE XVIII.

This treaty shall remain in force for twenty years from the date of the exchange of ratifications. After the expiration of that period, it shall continue in operation until one of the contracting parties shall have notified all the others of its desire to determine it. In the event of such notice the treaty shall continue obligatory upon the party giving it for one year thereafter, but the withdrawal of one or more nations shall not invalidate the treaty with respect to the other nations concerned.

ARTICLE XIX.

This treaty shall be ratified by all the nations approving it, according to their respective constitutional methods; and the ratifications shall be exchanged in the city of Washington on or before the first day of May, A. D. 1891.

Any other nation may accept this treaty and become a party thereto, by signing a copy thereof and depositing the same with the Government of the United States; whereupon the said Government shall communicate this fact to the other contracting parties.

In testimony whereof the undersigned plenipotentiaries have hereunto affixed their signatures and seals.

Done in the city of Washington, in copies in English, Spanish, and Portuguese, on this day of the month of , one thousand eight hundred and ninety.

II.—RECOMMENDATION TO EUROPEAN POWERS.

The International American Conference resolves: That this Conference, having recommended arbitration for the settlement of disputes among the Republics of America, begs leave to express the wish that controversies between them and the nations of Europe may be settled in the same friendly manner.

It is further recommended that the government of each nation herein represented communicate this wish to all friendly powers.

que cada parte haga para su representación y defensa en el juicio, serán de su cuenta.

ARTÍCULO XVII.

Las naciones interesadas en la contienda formarán, en cada caso, el Tribunal arbitral, de acuerdo con las reglas establecidas en los artículos precedentes. Solo por mútuo y libre consentimiento de todas ellas, podrán separarse de dichas disposiciones para constituir el Tribunal en condiciones diferentes.

ARTÍCULO XVIII.

Este Tratado subsistirá durante veinte años contados desde la fecha del canje de las ratificaciones. Concluido este término, seguirá en vigor hasta que alguna de las partes contratantes notifique á las otras su deseo de que caduque. En este caso, continuará subsistente hasta que transcurra un año desde la fecha de dicha notificación.

Es entendido, sin embargo, que la separación de alguna de las partes contratantes no invalidará el Tratado respecto de las otras partes.

ARTÍCULO XIX.

Este Tratado se ratificará por todas las naciones que lo aprueben, conforme á sus respectivos procedimientos constitucionales; y las ratificaciones se canjearán en la ciudad de Washington, el día 1° de Mayo de 1891, ó antes, si fuere posible.

Cualquiera otra nación puede adherir á este Tratado y ser tenida como parte en él, firmando un ejemplar del mismo, y depositándolo ante el Gobierno de los Estados Unidos, el cual hará saber este hecho á las otras partes contratantes.

En fé de lo cual, los infrascritos Plenipotenciarios han puesto sus firmas y sellos.

Hecho en la ciudad de Washington, en ejemplares en inglés, español y portugués á los días del mes de de mil ochocientos noventa.

II.—RECOMENDACIÓN SOBRE ARBITRAJE CON POTENCIAS EUROPEAS.

La Conferencia Internacional Americana resuelve: Que habiendo recomendado esta Conferencia el arbitraje para la decisión de las disprtas entre las Repúblicas de América, se permite expresar el deseo de que las controversias entre ellas y las naciones de Europa sean decididas por el mismo amistoso medio.

La Conferencia recomienda ademas que los respectivos gobiernos de las naciones en ella representadas comuniquen este voto á todas las potencias amigas.

III.—THE RIGHT OF CONQUEST.

Whereas the International American Conference feels that it would fall short of the most exalted conception of its mission were it to abstain from embodying its pacific and fraternal sentiments in declarations tending to promote national stability and guaranty just international relations among the nations of the continent: Be it therefore

Resolved, That it earnestly recommends to the Governments therein represented the adoption of the following declarations:

First. That the principle of conquest shall not, during the continuance of the Treaty of Arbitration, be recognized as admissible under American public law.

Second. That all cessions of territory made during the continuance of the Treaty of Arbitration shall be void, if made under threats of war or the presence of an armed force.

Third. Any nation from which such cessions shall be exacted may demand that the validity of the cessions so made shall be submitted to arbitration.

Fourth. Any renunciation of the right to arbitration made under the conditions named in the second section shall be null and void.

III.—DERECHO DE CONQUISTA.

Considerando: Que la Conferencia Internacional Americana no llenaria la parte mas elevada de su misión si se abstuviera de consagrar sus aspiraciones pacíficas y fraternales por medio de declaraciones que consoliden los vínculos nacionales y afianzen las relaciones internacionales de todos los Estados del Continente.

Resuelve: Encarecer á los Gobiernos representados en ella, la adopción de las siguientes declaraciones:

Primera. El principio de conquista queda eliminado del Derecho público americano, durante el tiempo que esté en vigor el Tratado de arbitraje.

Segunda. Las cesiones de territorios que se hicieren durante el tiempo que subsista el tratado de arbitraje serán nulas, si se hubieren verificado bajo la amenaza de la guerra, ó la presión de la fuerza armada.

Tercera. La nación que hubiere hecho tales cesiones tendrá derecho para exigir que se decida por arbitramento acerca de la validez de ellas.

Quarta. La renuncia del derecho de recurrir al arbitraje, hecha en las condiciones del artículo segundo, carecerá de valor y eficacia.

RECIPROCITY TREATIES WITH LATIN AMERICA.

MESSAGE

OF THE

PRESIDENT OF THE UNITED STATES

AND

LETTER OF THE SECRETARY OF STATE

SUBMITTING THE

RECOMMENDATIONS OF THE INTERNATIONAL
AMERICAN CONFERENCE.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State relative to proposed reciprocal commercial treaties between the United States and the other American Republics.

JUNE 19, 1890.—Laid upon the table and ordered to be printed.

To the Senate and House of Representatives:

I transmit herewith, for your information, a letter from the Secretary of State, inclosing a report of the International American Conference, which recommends that reciprocal commercial treaties be entered into between the United States and the several other Republics of this hemisphere.

It has been so often and so persistently stated that our tariff laws offered an insurmountable barrier to a large exchange of products with the Latin American nations, that I deem it proper to call especial attention to the fact that more than 87 per cent. of the products of those nations sent to our ports are now admitted free. If sugar is placed upon the free list, practically every important article exported from those States will be given untaxed access to our markets, except wool. The real difficulty in the way of negotiating profitable reciprocity treaties is, that we have given freely so much that would have had value in the mutual concessions which such treaties imply. I can not doubt, however, that the present advantages which the products of these near and friendly States enjoy in our markets—though they are not by law exclusive—will, with other considerations, favorably dispose them to adopt such measures, by treaty or otherwise, as will tend to equalize and greatly enlarge our mutual exchanges.

It will certainly be time enough for us to consider whether we must cheapen the cost of production by cheapening labor, in order to gain access to the South American markets, when we have fairly tried the effect of established and reliable steam communication, and of convenient methods of money exchanges. There can be no doubt, I think, that with these facilities well established, and with a rebate of duties upon imported raw materials used in the manufacture of goods for export, our merchants will be able to compete in the ports of the Latin American nations with those of any other country.

If after the Congress shall have acted upon pending tariff legislation it shall appear that, under the general treaty-making power, or under any special powers given by law, our trade with the States represented in the Conference can be enlarged upon a basis of mutual advantage, it will be promptly done.

BENJ. HARRISON.

EXECUTIVE MANSION, *June 19, 1890.*

RECIPROCITY TREATIES WITH THE LATIN AMERICAN STATES.

LETTER FROM THE SECRETARY OF STATE.

DEPARTMENT OF STATE,
Washington, June 19, 1890.

To the PRESIDENT:

I beg leave to submit herewith the report upon "Customs Union" adopted by the International American Conference.

The act of Congress, approved May 24, 1888, authorizing the President to invite delegates to this Conference, named as one of the topics to be considered, "Measures toward the formation of an American customs union, under which the trade of the American nations shall so far as possible and profitable be promoted."

The committee of the Conference to which this topic was referred interpreted the term "customs union" to mean an association or agreement among the several American nations for a free interchange of domestic products, a common and uniform system of tariff laws and an equitable division of the customs dues collected under them.

Such a proposition was at once pronounced impracticable. Its adoption would require a complete revision of the tariff laws of all the eighteen nations, and most if not all our sister republics are largely, if not entirely, dependent upon the collection of customs dues for the revenue to sustain their Governments. But the Conference declared that partial reciprocity between the American Republics was not only practicable, but must necessarily increase the trade and the development of the material resources of the countries adopting that system, and it would in all probability bring about as favorable results as those obtained by free trade among the different States of this Union."

The Conference recommended, therefore, that the several Governments represented negotiate reciprocity treaties "upon such a basis as would be acceptable in each case, taking into consideration the special situations, conditions, and interests of each country, and with a view to promote their common welfare."

The Delegates from Chili and the Argentine Republic did not concur in these recommendations, for the reason that the attitude of our Congress at that time was not such as to encourage them to expect favorable responses from the United States in return for concessions which their Government might offer. They had come here with an expectation that our Government and people desired to make whatever concessions were necessary and possible to increase the trade between the United States and the two countries named. The President of the Argentine Republic, in communicating to his congress the appointment of Delegates to the International Conference, said:

The Argentine Republic feels the liveliest interest in the subject, and hopes that its commercial relations with the United States may find some practical solution of the question of the interchange of products between the two countries, considering that this is the most efficacious way of strengthening the ties which bind this country with that grand Republic whose institutions serve us as a model.

It was, therefore, unfortunate that the Argentine delegates, shortly

after their arrival in Washington, in search of reciprocal trade, should have read in the daily press that propositions were pending in our Congress to impose a heavy duty upon Argentine hides, which for many years had been upon the free list, and to increase the duty on Argentine wool. Since the adoption of the recommendations of the Conference, which I herewith inclose, hides have been restored to the free list, but the duty upon carpet wool remains, and, as the Argentine delegates declared, represents the only concession we have to offer them in exchange for the removal of duties upon our peculiar products.

Only those who have given the subject careful study realize the magnitude of the commerce of these sister nations. In 1888 the combined imports of Chili and the Argentine Republic reached the enormous sum of \$233,127,698. The statistics of Chilean commerce for 1889 have not yet been received, but the imports of the Argentine Republic for that year were \$143,000,000. These imports consisted, in the greater part, of articles that could have been furnished by the manufacturers of the United States; yet, in 1888, of the total of \$233,000,000 imports, we contributed but \$13,000,000, while England contributed \$90,000,000; Germany, \$43,000,000; and France, 34,000,000.

With our extraordinary increase in population, and the even more extraordinary increase in material wealth, our progress in trade with South America has been strangely hindered and limited.

In 1868, our total exports to all the world were \$375,737,000, of which \$53,137,000 went to Spanish America—14 per cent.

In 1888, our exports to all the world were \$742,368,000 (an increase of 100 per cent.), while but \$69,273,000 went to Spanish America, little more than 9 per cent.; and the greatest gain, (nine millions) has been noticed during the last two years.

It was the unanimous judgment of the delegates that our exports to these countries and to the other republics could be increased to a great degree by the negotiation of such treaties as are recommended by the Conference. The practical, every day experience of our merchants engaged in the trade, demonstrates beyond a question that in all classes of merchandise which we have long and successfully produced for export, they are able to compete with their European rivals in quality and in price; and the reiterated statement that our Latin American neighbors do not buy of us because we do not buy of them, or because we tax their products, has been annually contradicted by the statistics of our commerce for a quarter of a century.

The lack of means for reaching their markets has been the chief obstacle in the way of increased exports. The carrying trade has been controlled by European merchants who have forbidden an exchange of commodities. The merchandise we sell in South America is carried there in American ships, or foreign ships chartered by American commission houses. The merchandise we buy in South America is brought to us in European vessels that never take return cargoes, but sail for Liverpool, Havre, Bremen, or Hamburg with wheat, corn and cotton. There they load again with manufactured goods for the South American markets, and continue their triangular voyages, paying for the food they are compelled to buy of us with the proceeds of the sale of their manufactures in markets that we could, would supply, if we controlled the carrying trade.

France taxes imports as we do, and in 1880 her merchants suffered, as ours do now, from the lack of transportation facilities with the Argentine Republic. Under liberal encouragement from the Government, direct and regular steamship lines were established between Havre and

4 RECIPROCITY TREATIES WITH THE LATIN AMERICAN STATES.

Buenos Ayres, and, as a direct and natural result, her exports increased from \$8,292,872 in 1880, to \$22,996,000 in 1888.

The experience of Germany furnishes an even more striking example. In 1880 the exports from Germany to the Argentine Republic were only \$2,365,152. In 1888 they were \$13,310,000. "This result," writes Mr. Baker, our most useful and intelligent consul at Buenos Ayres, "is due, first to the establishment of quick and regular steam communication between the two countries; second, to the establishment of branch houses by German merchants and manufacturers; and third, to the opening of a German-Argentine bank to facilitate exchange."

There is no direct steam-ship communication whatever between the United States and the Argentine Republic; and there are no direct banking facilities. The International American Conference has earnestly recommended the establishment of both; but reciprocal exchanges of tariff concessions will be equally effective in stimulating commerce, and in increasing the export of the products of which we have the largest surplus, not only to the progressive Republic named, but to all the other American nations.

The Conference believed that while great profit would come to all the countries if reciprocity treaties should be adopted, the United States would be by far the greatest gainer. Nearly all the articles we export to our neighbors are subjected to heavy customs taxes; so heavy, in many cases, as to prohibit their consumption by the masses of the people. On the other hand, more than 87 per cent. of our imports from Latin America are admitted free, leaving but 12 per cent. upon which duties may still be removed. But, mindful of the fact that the United States has, from time to time, removed the duties from coffee, cocoa, india rubber, hides, cinchona bark, dye and cabinet woods, and other Latin America products, our Government may confidently ask the concessions suggested.

The increased exports would be drawn alike from our farms, our factories, and our forests. None of the Latin American countries produce building lumber; the most of them are dependent upon foreign markets for their breadstuffs and provisions, and in few is there any opportunity or inclination for mechanical industry.

The effect of such reciprocity would be felt in every portion of the land. Not long ago the Brazilian Mail Steam-ship Company took the trouble to trace to its origin every article that composed the cargo carried by one of its steamers to Rio de Janeiro, and the investigation disclosed the fact that thirty-six States and Territories contributed to the total, as follows:

New York.....	\$74,546.00	North Carolina.....	2,647.00
Vermont.....	96.00	Maryland.....	2,359.00
Delaware.....	20,908.00	Mississippi.....	2,056.00
Illinois.....	19,331.47	Louisiana.....	2,111.00
New Jersey.....	17,054.40	Wyoming.....	1,800.00
Pennsylvania.....	43,065.00	Oregon.....	1,183.00
Connecticut.....	11,874.00	Tennessee.....	1,150.00
Kansas.....	11,332.00	Iowa.....	807.00
Indiana.....	9,098.00	South Carolina.....	587.00
Massachusetts.....	7,190.00	Kentucky.....	781.00
Ohio.....	6,250.00	Wisconsin.....	576.00
New Hampshire.....	6,035.00	California.....	239.00
Missouri.....	5,773.00	Dakota.....	220.00
Georgia.....	5,096.00	Texas.....	162.00
Rhode Island.....	4,020.00	Nebraska.....	125.00
Michigan.....	3,732.00	Alabama.....	56.00
Virginia.....	3,704.50	Florida.....	40.00
Maine.....	2,765.00		
Minnesota.....	2,668.00		
			<hr/> \$301,417.41

The 12 per cent. of our imports from Latin America upon which duties are still assessed consists only of raw sugar, and the coarse grades of wool used in the manufacture of carpets.

The sugar growing nations comprise four-fifths, or 40,000,000, of Latin America; but with geographical conditions against them, their free labor can not successfully compete with the coolie labor of the European colonies. A slight discrimination in their favor would greatly stimulate their agricultural interests, enlarge their purchasing power, and tend to promote friendly sentiments and intercourse.

The wool-growing nations are Chili, Uruguay, and the Argentine Republic, and from them our manufacturers of carpets receive a great portion of their supply. It was most strongly urged by the Delegates who had carefully studied this subject, that the free admission of coarse wools from these countries could not prove injurious to the wool-growers of the United States, because the greater profit derived by them from the higher grades discourages, if it does not actually prohibit, their production. On the contrary, they maintained that the free importation of the coarse wool would result in a large reduction in the cost of the cheaper grades of carpets, and enable the manufacturers of the United States to secure an enormous export trade in these fabrics. It was also suggested that the use of the coarse wools for the purpose of adulteration in the manufacture of clothing might be prevented by requiring that imports withdrawn for the manufacturer of carpets should be so designated to exempt them from customs dues, and the existing duty retained upon those used for other purposes.

The wool-growers of the Argentine Republic protest against what they consider a serious discrimination against their product in the tariff laws of the United States, which impose a duty upon the gross weight instead of the value of the article. The Argentine wools are much heavier in grease and dirt than those from Australia and New Zealand, which is said to be due to unavoidable climatic conditions, and sell at a lower price. But the imports from the three countries are subject to the same duty. This fact was very strongly urged, to the end that at least equal advantages should be given to the products of a friendly country with which we are endeavoring to build up a trade.

Excepting raw cotton, our four largest exports during the last fiscal year were breadstuffs, provisions, refined petroleum, and lumber.

The following statement shows the total exports of each of said articles in 1889, and the proportion exported to Latin America:

	Total exports.	Exported to Latin America.
Breadstuffs.....	\$123, 876, 423	\$5, 123, 523
Provisions.....	104, 122, 328	2, 507, 375
Refined petroleum.....	44, 830, 424	2, 948, 149
Wood and lumber.....	26, 907, 161	5, 039, 886

These figures should be closely studied. It would be difficult to understand, but for the explanations given in the Conference, why, out of the three hundred millions of staples exported from this country, only fifteen millions should be consumed in all Latin America with its population of fifty millions of people, when the United States is the only source of supply for these articles, which are regarded by us as the necessities of life.

The foreign delegates all agreed that this proportion could be increased many fold by extending to their people the ability to purchase; and the ability to purchase rests, in their opinion, upon reciprocal concessions.

Attached hereto is a statement showing the duties charged by the South American countries of the largest commerce upon the articles which they import chiefly from the United States; and also a statement showing the meager amounts of our peculiar exportable products shipped to the several Latin-American States. By a comparison of these statements the effect of the removal of the duties upon these articles by the countries of Latin America will at once be apparent.

Fifteen of the seventeen Republics with which we have been in conference have indicated, by the votes of their representatives in the International American Conference, and by other methods which it is not necessary to define, their desire to enter upon reciprocal commercial relations with the United States; the remaining two express equal willingness, could they be assured that their advances would be favorably considered.

To escape the delay and uncertainty of treaties it has been suggested that a practicable and prompt mode of testing the question was to submit an amendment to the pending tariff bill, authorizing the President to declare the ports of the United States free to all the products of any nation of the American hemisphere upon which no export duties are imposed, whenever and so long as such nation shall admit to its ports free of all national, provincial, (state), municipal, and other taxes, our flour, corn meal, and other breadstuffs, preserved meats, fish, vegetables and fruits, cotton-seed oil, rice and other provisions, including all articles of food, lumber, furniture and other articles of wood, agricultural implements and machinery, mining and mechanical machinery, structural steel and iron, steel rails, locomotives, railway cars and supplies, street cars, and refined petroleum. I mention these particular articles because they have been most frequently referred to as those with which a valuable exchange could be readily effected. The list could no doubt be profitably enlarged by a careful investigation of the needs and advantages of both the home and foreign markets.

The opinion was general among the foreign delegates that the legislation herein referred to would lead to the opening of new and profitable markets for the products of which we have so large a surplus, and thus invigorate every branch of agricultural and mechanical industry. Of course the exchanges involved in these propositions would be rendered impossible if Congress, in its wisdom, should repeal the duty on sugar by direct legislation, instead of allowing the same object to be attained by the reciprocal arrangement suggested.

Respectfully submitted.

JAMES G. BLAINE.

APPENDIX A.

EXPORTS TO LATIN AMERICA.

Statement showing the amount of breadstuffs, provisions, refined petroleum, and lumber exported to the Latin American States during the fiscal year ending June 30, 1889; also the population of each of said States.

BREADSTUFFS.

In 1889 our shipment of breadstuffs to Latin America were as follows:

	Population.	Exports.
Mexico.....	12,000,000	\$345,048
Central America.....	2,800,000	821,318
Colombia.....	3,900,000	821,318
Venezuela.....	2,200,000	668,766
Brazil.....	14,000,000	2,812,281
Uruguay.....	600,000	2,033
Ecuador.....	1,000,000	None.
Argentine Republic.....	3,900,000	Do.
Bolivia.....	1,200,000	Do.
Chili.....	2,500,000	Do.
Paraguay.....	250,000	Do.
Peru.....	2,600,000	46,284
Total.....	46,950,000	5,136,528

PROVISIONS.

Our exports of provisions during the same year were as follows:

	Population.	Exports.
Mexico.....	12,000,000	\$390,425
Central America.....	2,800,000	265,873
Colombia.....	3,900,000	607,474
Venezuela.....	2,200,000	554,653
Brazil.....	14,000,000	438,385
Uruguay.....	600,000	42,900
Ecuador.....	1,000,000	None.
Argentine Republic.....	3,900,000	49,431
Bolivia.....	1,200,000	None.
Chili.....	2,500,000	Do.
Paraguay.....	250,000	Do.
Peru.....	2,600,000	114,873
Total.....	46,950,000	2,507,375

REFINED PETROLEUM.

Our shipments of refined petroleum were as follows:

	Population.	Exports.
Mexico.....	12,000,000	\$175,537
Central America.....	2,800,000	None reported.
Colombia.....	3,900,000	Do.
Venezuela.....	2,200,000	88,926
Brazil.....	14,000,000	832,367
Uruguay.....	600,000	241,276
Ecuador.....	1,000,000	None.
Argentine Republic.....	3,900,000	426,654
Bolivia.....	1,200,000	None.
Chili.....	2,500,000	183,389
Paraguay.....	250,000	None.
Peru.....	2,600,000	Do.
Total.....	46,950,000	2,948,149

8 RECIPROCITY TREATIES WITH THE LATIN AMERICAN STATES.

Statement showing the amount of breadstuffs, etc., exported to the Latin American States, etc.—Continued.

WOOD AND LUMBER.

Our exports of wood and the manufactures thereof, including furniture, were as follows:

	Population.	Exports.
Mexico	12,000,000	\$1,280,126
Central America.....	2,800,000	205,160
Colombia	3,900,000	457,519
Venezuela	2,200,000	72,765
Brazil	14,000,000	384,495
Uruguay	600,000	412,754
Ecuador	1,000,000	None.
Argentine Republic	3,900,000	1,839,012
Bolivia	1,200,000	None.
Chili	2,500,000	279,495
Paraguay.....	250,000	None.
Peru.....	2,600,000	108,560
Total	46,950,000	5,039,886

APPENDIX B.

SOUTH AMERICAN TARIFF.

The following statement shows the duties charged by several countries of South America upon the principal articles imported from the United States. Duties are assessed upon the gross weight of the package, including the lumber of which it is made, and the waste often used to fill up. The duty on petroleum, for example, is charged per pound upon the whole, the can and the wooden frame that incloses the can.

ARGENTINE REPUBLIC.

Law 1886. Tariff not a continuing law. Only runs the year for which enacted; each Congress modifying its provisions. Tariff except for a few specified articles is ad valorem.

Tariff for 1889.—Specified articles.

Wheat	per cwt..	\$0.80
Starch.....	do.....	3.50
Crackers and biscuits.....	do.....	4.50
Flour and corn meal.....	do.....	2.00
Kerosene	per quart..	.05
Furniture, preserved fruits, preserved vegetables, preserved meats....	per cent.	
ad valorem		45
White pine and spruce lumber	per cent. ad valorem..	10
Agricultural implements:		
Plows.....	per cent. ad valorem..	5
Spades, handles, axes, hatchets, cutting knives, sickles	do.....	25
Machines for adjusting wire fences; for making butter	do.....	25
Fanning-machines.....	do.....	5
Corn mills.....	do.....	25
Threshing-machines	do.....	5
Steam-engines	do.....	5
Mowers and reapers	do.....	5
Fish	do.....	25
Provisions:		
Beef, pork, bacon, lard, butter, cheese, etc	do.....	25
Hams		Free

NOTE.—By a supplemental law there is a duty of 1 per cent. additional to the rates above specified on all articles of importation.

BRAZIL.

Breadstuffs:	
Barley	per cwt.. \$4.00
Biscuits:	
Ship biscuits	do.... .20
Other kinds of crackers	do.... 4.00
Corn	do.... 1.00
Flour	do.... .20
Fish:	
Salted, dried, or pickled	do.... .40
Preserved, in whatever manner prepared	do.... 5.70
Kerosene	do.... 1.10
Provisions:	
Hams, prepared in any way	do.... 4.70
Canned, of any preparation, not medical	do.... 5.70
Sausages	do.... 9.50
Lard	do.... 2.30
Butter	do.... 6.60
Cheese	do.... 5.70
Wood:	
Oak (stocks)	per meter.. \$0.16 to \$3.25
Pine (stocks) or other wood, not classified	do.... .08 to 1.68
Planks or logs of oak, teak, or pine	per cubic meter.. .67
Staves	per pound.. .04
Chairs	each.. .12 to 3.36
Beds	do.... 3.36 to 12.60
Bureaux	do.... 2.10 to 12.60
Washstands	do.... .75 to 8.40
Tables	do.... 1.68 to 15.12
Sofas	do.... .63 to 8.40

CHILE.

	Specific.	Ad va- lorem.
		Per cent.
Agricultural implements:		
Machinery, gross	\$10.00 per cwt.....	15
Plows, gross	\$6.50 per cwt.....	15
Spades, shovels, gross	\$20.00 per cwt.....	15
Forks:		
Three-teeth	\$7.00 per dozen	15
Four-teeth	\$8.00 per dozen	15
Five-teeth	\$12.00 per dozen	15
Six-teeth	\$15.00 per dozen	15
Biscuits:		
Ship	\$6.50 per cwt.....	35
Cabin	\$8.70 per cwt.....	35
Fish, large, dried, smoked, or salted, gross		
Salmon:	\$6.00 per cwt.....	35
Dried, smoked, or salted, gross	\$8.50 per cwt.....	35
Tinned, gross	\$12.50 per cwt.....	35
Small fish:		
Dried, smoked, or salted, net	\$8.50 per cwt.....	35
Tinned, net	\$11.00 per cwt.....	35
Fruits, preserves, gross	\$15.00 per cwt.....	35
Naptha, paraffine, petroleum, and kerosene	\$4.00 per cwt.....	25
Provisions, salted beef or pork, gross	\$6.00 per cwt.....	25
Lard:		
In tins, gross	\$15.00 per cwt.....	
In kegs, gross	\$11.00 per cwt.....	25
Cheese		
	\$20.00 per cwt.....	25
Vegetables:		
Dried, gross	\$15.00 per cwt.....	
In water, vinegar, or sauce (bottled), gross	\$10.00 per cwt.....	25
In water, vinegar, or sauce (barreled), gross	\$5.00 per cwt.....	25
Wood, furniture on valuation		35

NOTE.—In addition to the percentage specified in the tariff there is a surcharge of 40 per cent. on all goods.

10 RECIPROCITY TREATIES WITH THE LATIN AMERICAN STATES.

COLOMBIA.

	[Gross weight.]	Per cwt.
Flour, corn meal, and other breadstuffs.....		\$2. 30
Potatoes, onions, corn, rice, and beans.....		. 50
Codfish, meat in pickle		2. 30
Preserved meats		10. 00
Petroleum		4. 50
Lumber .....		. 50
Beds, large tables for dining.....		2. 50
Other furniture.....		15. 00
Iron or steel wire for fences		1. 50
Machinery exceeding a ton in weight.....		. 50
under a ton in weight.....		2. 50
Agricultural machines		1. 60

NOTE.—An additional duty of 25 per cent. is charged (under decree C93 of 1885).

VENEZUELA.

	[Gross weight.]	Per cwt.
Breadstuffs:		
Bran, barley (in husk), corn, oats, rice (in grain), rye (in grain), wheat (in grain).....		\$0. 87
Beans, rice (ground), potatoes.....		2. 21
Barley, corn starch.....		6. 63
Crackers, sweet		6. 64
plain.....		2. 21
Wheat flour.....		2. 21
Potatoes, corn and rye flours.....		6. 63
Fruits:		
Fresh apples, pears, and grapes.....		. 87
Dried, or in liquor or in sirup.....		6. 63
Fish (salt or smoked)		2. 21
Steel wire		6. 63
Iron wire (galvanized) unmanufactured .....		. 87
Beer.....		2. 21
Kerosene		2. 21
Provisions:		
Hams, tongues		2. 21
Lard and butter		2. 21
Cheese		6. 63
Vegetables, preserved.....		6. 63
Wood manufactures:		
Common, such as boards, beams, and scantling of pine, oak, etc., for sawing into boards.....		. 87
Sawed, planed, or joined, fine, for musical instruments and cabinet work, veneers, barrels, pipes, or hogsheads, set up or in part, staves, blinds, for doors and windows.....		2. 21
Manufactured (not specified) billiard and bagatelle tables with accessories, boxes, chairs, piano stools, carpenters' chests, planes, saddle-trees, furniture (common) of wood, cane, or straw.....		6. 63
Sashes, molding, trunks.....		11. 05
Furniture, upholstered or of fine woods.....		11. 05

APPENDIX C.

REPORT ON CUSTOMS UNION.

(As adopted by the Conference.)

The Committee on Customs Union has made a careful study of the questions submitted to its consideration by the International American Conference, in reference to forming a customs union among the several nations of this continent.

It is generally understood by customs union the establishing among several nations of a single customs territory, to wit, that the nations forming the union shall

collect import duties on foreign goods, under substantially the same tariff laws; divide the proceeds thereof in a given proportion, and mutually receive, free of duty, their respective natural or manufactured products.

The acceptance of this plan would demand, as a previous requirement, a change in the fundamental laws of the countries accepting the union. Even after they were ready to make such changes, a great many other difficulties, almost insurmountable, would have to be overcome; as, for instance, fixing the representation of each nation at the international assembly empowered to frame a common tariff and amend it in the future. The territorial extent, the populations, and the national wealth differ so much among the American Republics that if these conditions should be taken as the basis of representation at said assembly, the small States would not have sufficient protection for their interests; and, if all the nations were admitted as sovereign on an equal footing, the large ones would be insufficiently protected. It might be necessary, to obviate this difficulty, to create two bodies, one representing the population and the other the States, in the manner in which a like problem was solved in the Constitution of the United States of America. But this step would, in the opinion of the committee, require a partial sacrifice of the national sovereignty of the American nations, and more radical changes in their respective constitutions than in their judgment they are willing to accept.

If by customs union is meant the free-trade between the American nations of all their natural or manufactured products, which is, properly speaking, unrestricted reciprocity, the committee believes it is in principle acceptable, because all measures looking to the freedom of commerce must necessarily increase the trade and the development of the material resources of the countries accepting that system, and it would in all probability bring about as favorable results as those obtained by free-trade among the different States of this Union.

But while the committee believes that such a union is at present impracticable as a continental system, among other reasons because the import duties levied on foreign trade constitute the main sources of revenue of all the American nations, and such of them as are not manufacturing countries would thus lose more or less of such revenue, on which they depend in a great measure to defray their national expenses; while the manufacturing countries, such as the United States of America, would have to abandon, at least partially, the protective policy which they have adopted to more or less extent, and they do not seem yet prepared to change that system. Besides, a reciprocity treaty mutually advantageous between two contiguous countries might prove onerous if extended to all as a continental compact, especially as the products of many of the American Republics are similar. Therefore, while these obstacles are in the way, it seems premature to propose free trade among the nations of this hemisphere.

But although it is not easy, in the opinion of the committee, to reach at once unrestricted reciprocity, that end might be obtained gradually and partially. The first and most efficient step in that direction is the negotiation of partial reciprocity treaties among the American nations, whereby each may agree to remove or diminish their respective import duties on some of the natural or manufactured products of one or more of the other nations in exchange for similar and equivalent advantages, as, if the mutual concessions were not equivalent, the treaties would soon become odious, and could not last but for a limited time, and would discredit the system. If after this has been tried for some reasonable time a good result should follow, as it is to be expected, the number of articles on the free list might be enlarged in each case, from time to time, until they attain, through the development of the natural elements of wealth, other sources of revenue or an increase of the existing ones, which would allow the contracting nations to reach unrestricted reciprocity or a free trade among some or all the American nations.

RECOMMENDATION OF THE CONFERENCE.

Therefore the committee proposes:

To recommend to such of the Governments represented in the Conference as may be interested in the concluding of partial reciprocity, commercial treaties, to negotiate such treaties with one or more of the American countries as it may be in their interest to make them, under such a basis as may be acceptable in each case, taking into consideration the special situation, conditions, and interests of each country, and with a view to promote their common welfare.

REPORT

OF THE

INTERNATIONAL AMERICAN CONFERENCE

RELATIVE TO

AN INTERCONTINENTAL RAILWAY LINE.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State and report of the International American Conference relative to an international railway line.

MAY 19, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith a report of the International American Conference, recently in session at this Capital, recommending a survey of a route for an intercontinental line of railroad to connect the systems of North America with those of the Southern Continent, and to be conducted under the direction of a board of commissioners representing the several American Republics.

Public attention has chiefly been attracted to the subject of improved water communication between the ports of the United States and those of Central and South America. The creation of new and improved steam-ship lines undoubtedly furnishes the readiest means of developing an increased trade with the Latin-American nations. But it should not be forgotten that it is possible to travel by land from Washington to the southernmost capital of South America, and that the opening of railroad communication with these friendly States will give to them and to us facilities for intercourse and the exchanges of trade that are of special value. The work contemplated is vast, but entirely practicable. It will be interesting to all and perhaps surprising to most of us to notice how much has already been done in the way of railroad construction in Mexico and South America that can be utilized as part of an intercontinental line. I do not hesitate to recommend that Congress make the very moderate appropriation for surveys suggested by the Conference, and authorize the appointment of commissioners and the detail of engineer officers to direct and conduct the necessary preliminary surveys.

BENJ. HARRISON.

EXECUTIVE MANSION,

May 19, 1890.

PROPOSED INTERCONTINENTAL RAILWAY.

*Letter from the Secretary of State.*DEPARTMENT OF STATE,
Washington, May 12, 1890.

To the PRESIDENT:

I have the honor to submit herewith a plan for a preliminary survey for a railway line to connect the great commercial cities of the American hemisphere. No more important recommendation has come from the International American Conference, and I earnestly commend it to your attention, with full confidence that prompt action will be taken by Congress to enable this Government to participate in the promotion of the enterprise. The resolutions of the Conference are accompanied by special reports concerning the transportation facilities that already exist in the several American Republics. These reports comprise all the information that could be gathered upon this important subject, and will be found both interesting and authentic.

Under the generous and progressive policy of President Diaz the railways of Mexico have been extended southward as well as northward and toward the two oceans. The development of the Argentine system has been equally rapid. Lines of track now reach from Buenos Ayres to the northern cities of that Republic, and nearly to the Bolivian boundary. Chili has a profitable system of railroads from the mountains to the Pacific Ocean, and the completion of the tunnel that is now being pierced through the Cordilleras will bring Valparaiso within two days' travel of Buenos Ayres. In the other Republics similar enterprise has been shown. Each has its local lines of railway, and to connect them all and furnish the people of the Southern Continent the means of convenient and comfortable intercourse with their neighbors north of the Isthmus is an undertaking worthy the encouragement and co-operation of this Government. In no other way could the Government and the people of the United States contribute so much to the development and prosperity of our sister Republic and at the same time to the expansion of our commerce.

A very important feature of the report, to which I especially direct your attention, will be found in the international declaration that the line of the proposed railway shall be forever neutral territory; that the material necessary for the construction and operation of the road shall be admitted free of customs dues, and that its property and revenues shall be always exempt from all forms of taxation. This guaranty, having all the force of a treaty, will stimulate private and public confidence, and thus lead to the investment of capital that might otherwise be reluctant and distrustful.

It is proposed that a survey to ascertain the best and most economical routes be made under the direction of an international commission, and that the expense be shared by the several nations of the hemi-

sphere in proportion to their respective populations. The share of the United States is estimated to be \$65,000, and I would respectfully suggest the propriety of securing from Congress an appropriation for that purpose. Three commissioners will be required to represent the United States upon the international board, and authority should be asked for the detail of officers of the Army and Navy to serve as engineers in conducting the survey.

The headquarters of the commission, by a vote of the International Conference, will be located in Washington, and it is proposed to invite the commissioners to meet here on the 1st of October next, or as soon thereafter as may be practicable, for the purpose of organization and initiating the work of the survey.

Respectfully submitted,

JAMES G. BLAINE.

REPORT

OF THE

COMMITTEE ON RAILWAY COMMUNICATION.

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LIST OF MAPS.

Western Hemisphere.
United States, Mexico, and Central America.
Mexico.
Central America.
South America.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT OF THE COMMITTEE ON RAILWAY COMMUNICATION.

The International American Conference is of the opinion :

First. That a railroad connecting all or a majority of the nations represented in this Conference will contribute greatly to the development of cordial relations between said nations and the growth of their material interests.

Second. That the best method of facilitating its execution is the appointment of an international commission of engineers to ascertain the possible routes, to determine their true length, to estimate the cost of each, and to compare their respective advantages.

Third. That the said commission should consist of a body of engineers of whom each nation should appoint three, and which should have authority to divide into subcommissions and appoint as many other engineers and employés as may be considered necessary for the more rapid execution of the work.

Fourth. That each of the Governments accepting may appoint, at its own expense, commissioners or engineers to serve as auxiliaries to the subcommissions charged with the sectional surveys of the line.

Fifth. That the railroad, in so far as the common interests will permit, should connect the principal cities lying in the vicinity of its route.

Sixth. That if the general direction of the line can not be altered without great inconvenience, for the purpose mentioned in the preceding article, branch lines should be surveyed to connect those cities with the main line.

Seventh. That for the purpose of reducing the cost of the enterprise the existing railways should be utilized as far as is practicable and compatible with the route and conditions of the continental railroad.

Eighth. That in case the results of the survey demonstrate the practicability and advisability of the railroad, proposals for the construction either of the whole line or of sections thereof should be solicited.

Ninth. That the construction, management, and operation of the line should be at the expense of the concessionaires, or of the persons to whom they sublet the work or transfer their rights, with all due formalities, the consent of the respective Governments being first obtained.

Tenth. That all materials necessary for the construction and operation of the railroad should be exempt from import duties, subject to such regulations as may be necessary to prevent the abuse of this privilege.

Eleventh. That all personal and real property of the railroad employed in its construction and operation should be exempt from all taxation, either national, provincial (State), or municipal.

Twelfth. That the execution of a work of such magnitude deserves to be further encouraged by subsidies, grants of land, or guaranties of a minimum of interest.

Thirteenth. That the salaries of the commission, as well as the expense incident to the preliminary and final surveys, should be assumed by all the nations accepting, in proportion to population according to the latest official census, or, in the absence of a census, by agreement between their several Governments.

Fourteenth. That the railroad should be declared forever neutral for the purpose of securing freedom of traffic.

Fifteenth. That the approval of the surveys, the terms of the proposals, the protection of the concessionaires, the inspection of the work, the legislation affecting it, the neutrality of the road, and the free passage of merchandise in transit, should be (in the event contemplated by article eighth) the subject of special agreement between all the nations interested.

Sixteenth. That as soon as the Government of the United States shall receive notice of the acceptance of these recommendations by the other Governments, it shall invite them to appoint the commission of engineers referred to in the second article, in order that it may meet in the city of Washinton, at the earliest possible date.

JUAN FRANCISCO VELARDE.

H. G. DAVIS.

E. A. MEXIA.

FERNANDO CRUZ.

JERÓNIMO ZELAYA.

JACINTO CASTELLANOS.

ANDREW CARNEGIE.

CARLOS MARTINEZ SILVA.

JOSÉ ANDRADE.

J. M. P. CAAMAÑO.

F. C. C. ZEGARRA.

E. C. VARAS.

MANUEL QUINTANA.

J. G. DO AMARAL VALENTE.

JOSÉ S. DECOUD.

H. GUZMAN.

LETTER FROM THE CHAIRMAN OF THE COMMITTEE.

INTERNATIONAL AMERICAN CONFERENCE,
Washington, April 18, 1890.

To the honorable President of the International American Conference :

MR. PRESIDENT: As an addition to the report made by the Committee on Railroads, I have the honor to transmit herewith to the table, for insertion as an appendix, the personal reports of the Delegations from Peru, Guatemala, Colombia, Costa Rica, Uruguay, Paraguay, Brazil, Honduras, Mexico, Bolivia, United States of America, Venezuela, Salvador, and Ecuador.

The Delegations from Argentine and Nicaragua have offered to send in reports of their respective countries. Although deficient in some statistical data, the accompanying reports give a general idea of the present service of the railroads, the length of the lines in operation, those in course of construction and survey; thus enabling one to appreciate the importance of the work realized up to date, and that what is needed to place in practical effect the beautiful idea of a continental railroad that will bind all the nations represented in the Conference.

I entertain the conviction that the day is not far distant when the great work of a continental railroad will become a fact, and that the recommendation made by the Conference will have contributed powerfully towards its realization.

I have no doubt that the measures for its survey and execution proposed by the Conference will receive the unanimous approval of all the Governments of America.

Saluting the President with such gratifying motives, and reiterating to him the assurance of my most high and distinguished consideration, I am

Your obedient servant,

JUAN FRANCISCO VELARDE.

RAILWAYS OF THE ARGENTINE REPUBLIC.

The first line built was probably that from Rosario to Córdoba, commenced in 1863 and finished in 1870. In 1873 the Government finished the first section of the Transandine Railway, 82 miles, from Villa Mercedes to Rio Cuarto. In 1875 the second section, from Rio Cuarto, 76 miles, was in operation. In 1880 were completed 59 miles, to the city of San Luis. In 1883, 75 more were finished, and La Paz became the terminus for the time being. In April, 1885, 80 miles were opened from La Paz to Mendoza; a branch of 100 miles from Mendoza to San Juan was opened at the same time. - The total cost to the Government thus far, of the 472 miles, had been \$13,000,000. From Mendoza to the Chilean boundary, through the Uspallata Valley, is 140 miles. The road runs at nearly double the elevation of the Central Pacific line across the Rocky Mountains. The Northern Central Argentine at Córdoba, connecting with the Central and extending northward to Salta, is a narrow-gauge road of 340 miles, and was continued through the province of Jujuy.

In 1885 three railways were opened for traffic—the Mercedes, Andine East Argentine, and Campana lines. The Tucuman line was to be completed in 1876, when there would be in all ten railroads with a total of 2,260 kilometers, or 1,404 miles, in operation. The Andine line was leased to a private person for four years with the condition that he should receive 80 per cent. of the gross receipts for the first three years and 75 per cent. for the last year. The Central Argentine, which opened in 1870, earned in 1875 a surplus of \$161,000 in addition to the guaranteed interest of 7 per cent on the capital stock. That surplus was paid over to the Government.

In 1886 there were in operation 6,152 kilometers, of which 1,877 were national, 1,104 provincial, and 3,160 private property. There were consequently added to the 2,318 kilometers existing in 1880, during the last five years, 3,834 kilometers. The total cost of the lines existing in 1885 was about \$1,000,000,000, or an average of about \$33,330 per mile.

The gross earnings of all the railroads in 1885 were \$416,150,894; the net earnings were \$6,489,701; the percentage of net earnings were 7.32 against 5 in the United States, and $4\frac{1}{2}$ in England, and $4\frac{1}{2}$ in Germany and France.

E. L. Baker, esq., United States consul at Buenos Ayres, in a report of December 17, 1886, says:

As showing the progress which railway construction has been making in the Argentine Republic, I may say that in October, 1880, the total number of kilometers was

2,318, of which 810 belonged to the national Government, 348 to the provincial government of Buenos Ayres, and 1,104 were in private hands. There are now 6,152 kilometers in the Republic, of which 1,877 belong to the nation, 1,104 to the provincial governments, and 3,161 to private companies; a gain of about 3,834 kilometers in a little over five years.

Mr. Vilas, secretary of legation at Buenos Ayres, in a report to Department of State, dated July 22, 1889, says:

I forward herewith certain figures taken from the report upon the railways of the Argentine Republic for the year 1888, prepared by Mr. Cortinez, under the direction of the national railway board recently created. * * *

Amount of railway capital in country in 1888, \$220,746,247; gross earnings, \$26,526,707; working expenses, \$15,529,993; net earnings, \$11,500,000.

Net earnings of Argentine railways for 1888.

Railways.	Capital.	Returns.	Expenses.	Net.
Buenos Ayres and Rosario	\$33,330,000	\$3,312,882	\$1,577,280	\$1,735,603
Primer Entre Riano	153,839	153,839	10,453	552
Central Argentine	18,648,000	3,813,325	1,798,113	2,017,212
East Argentine	4,989,615	271,185	269,882	1,303
Argentine Great Western	16,984,800	897,791	1,366,774	.....
Central Northern	26,990,342	2,367,941	1,594,638	773,303
Province of Buenos Ayres	27,474,283	4,867,550	2,873,622	1,993,928
Andine	4,366,565	441,024	284,182	156,842
Central Entre Riano	6,000,000	261,394	278,235	.....
Buenos Ayres Northern	2,991,487	735,325	365,854	369,471
Ensenada	6,681,885	1,152,791	552,843	599,948
Great Southern	40,320,000	6,172,033	2,782,847	3,389,186
Oeste Santa Fecino	3,000,000	277,015	336,903	.....
Santa Fé Colonies	9,839,688	801,946	615,256	186,690
Northwestern Argentine	4,273,920	12,267	12,267	.....

The following loans were made: Argentine Great Western, \$468,983.51; Central Entre Riano, \$16,841.43; Oeste Santa Fecino, \$59,888.65; total loans, \$545,713.58.

The rate of returns upon capital is as follows:

Lines.	Rates of returns.	Lines.	Rates of returns.
	<i>Per cent.</i>		<i>Per cent.</i>
Buenos Ayres and Rosario	7.04	Pacific Railway	2.16
Primer Entre Riano	0.35	Andine	3.06
Central Argentine	10.82	Northern Railway	12.35
East Argentine	0.26	Ensenada	8.96
Central Northern	2.86	Great Southern	8.41
Province of Buenos Ayres	7.86	Santa Fé Colonies	1.90

The number of passengers carried in 1888 was 9,681,233; tonnage of goods, 3,937,534.

United States Consul Edward L. Baker, under date of December 13, 1889, furnishes the following on railways in the Argentine Republic:

There continues to be a great movement throughout the Argentine Republic in the construction of railways. So great are the number of new concessions granted by the national Congress and by the different provincial legislatures that I find it impossible to name them all. Up to the meeting of the last Congress there were national concessions for seventeen different lines, of which thirteen enjoy the guaranty of the Government. These guarantied lines represent a total length of 7,961 kilometers (4,975 miles), and the aggregate length of the other lines 1,272 kilometers (795 miles), making a total of 5,770 miles. Among them are the following, viz: The Chaco and Tartagal Railway, the Reconquista and Formosa (Chaco) Railway, the Bahia Blanca and Villa Mercedes Railway, the San Juan and Salta Railway, the Chum-

bicha, Tinogasta and Andalgala Railway, the Goya and Monte Caseros Railway, the Resistencia and Metan Railway, the San Cristobal and Tucuman Railway, etc. A line from San Juan to Cabra Corral, in Salta, is being surveyed, as also one from Mendoza to San Rafael; also the line from Cobos to Salta via Lagunilla, and several others of less prominence.

The following roads are in the course of construction, to wit, the extensions of the Northern Central, the road now being opened beyond Tucuman as far as Chilcas. The branches from Dean Furnes to Chilcito, and from Chumbicha to Catamarca have the road-beds completed, and the track-laying has commenced. Beyond Chilcas towards Salta and Jujuy the work is still progressing, but there are many engineering difficulties to overcome, and not much has yet been accomplished. The line from Buenos Ayres to Mercedes, which is a link of the Transandine Railway, is now completed and opened to traffic, thus giving a through line from Buenos Ayres as far as Mendoza. Work continues to progress on the line from Mendoza towards Valparaiso, Chili, some of the track having already been laid, and by the end of the year it is expected that the Uspallata Pass of the Andes will be reached. For the construction of the railway from Monte Caseros to Corrientes and Posadas in the Misiones the necessary materials are now being received, and the work has commenced. The new line from Rosario via Sunchales to Tucuman is being rapidly pushed forward, and the rails are laid for 50 or 60 miles beyond Sunchales.

The last session of the Argentine Congress, in response to the recommendations of the President, made a very firm stand against the granting of any more charters or concessions with Government guaranties, and the fact that numerous applications were made for new lines without such guaranties shows that the condition of the country is now so promising that capital is ready to embark in such enterprises without Government aid (December 18, 1889).

Consul Baker's last report (December 22, 1889) says:

Railways, however, are rapidly extending themselves in nearly every part of the Argentine Republic. There was never before known such a push to obtain concessions or charters for new lines as has been the case during the last year, the National Government indiscriminately with the provincial governments being appealed to by the applicants. A year ago the Government expressed its determination to grant no more concessions which carried with them a guaranty on the part of the nation that if the enterprise did not pay a certain per cent. the Government would make good the difference; but, during the recent session of Congress, several new lines were chartered with this provision.

The total length of all the railways in the Argentine Republic now amounts to 7,700 kilometers, an increase since the previous year of 958 kilometers. There are now in process of construction as follows:

Description.	Length.	Description.	Length.
	<i>Kilometers.</i>		<i>Kilometers.</i>
By the Government:		By the provincial governments—continued.	
From Chumbicha to Catamarca . . .	65	From La Plata to Rio Santiago . . .	8
From Dean Furnes to Chilcito . . .	415	From Gualeguay to Tala	109
From Chiloas to Jujuy	124	From Nogoya to Victoria	50
From Santa Rosa to Salta	64	Madrid to Tucuman	105
By private parties with Government guaranty:		From Santa Fé provincial roads . .	444
Section of Northeast Argentine . .	809	By private companies, without guaranty:	
Section of Transandine	192	Cordoba to Santa Fé	282
Nanducito to Tucuman	1,070	Cañada de Gomez and Las Yervas .	127
By the provincial governments:		Cañada de Gomez and Pergamino .	141
From Nueve de Julio to Trenque-Lanquen	183	Sunchales and Tucuman	610
From Riachuelo to the maritime station	7	Total	4,796

During the year the railways of the country transported 8,373,500 passengers and 3,950,000 tons of cargo, against 7,173,500 passengers and 3,866,523 tons of cargo the previous year. The railways in operation have 602 locomotives, 912 coaches for passengers, and 14,324 cargo wagons, and they represent a capital of \$193,000,000.

During the year 1888 the National Government paid out of its treasury for guaranties to railways the sum of \$3,000,000 in gold. The President, however, in view of the fact that some of the guarantied railway companies persistently neglect to keep their roads in proper condition and are without the necessary equipment to transact the business for which they were chartered, has just issued an order suspending the payment of any further guaranties until they conform to the law in these respects.

It is not deemed necessary here to give a list of the various railways which have recently been chartered, but which have not yet been "floated," or whose surveys have not yet been completed. Owing to the present financial condition of the country, the construction of some of these will probably be postponed for the present. For the same reason the National Congress, at its recent session, failed to act upon another large "batch" of projected railways, but left them for future consideration.

RAILWAYS OF BOLIVIA.

*REPORT OF JUAN F. VELARDE, DELEGATE FROM BOLIVIA.**

MEMORANDUM ON RAILROADS IN BOLIVIA.

The Republic of Bolivia, with a population of 2,500,000, has an area of 55,000 square leagues, or 275,000 square kilometers.

Situated in the center of the South American continent, it is bounded on the north and east by Brazil, on the southeast by the river Paraguay and the Republic of that name, on the south by the Argentine Republic, on the southwest by Chili; on the west by the Pacific Ocean and Peru.

The eastern part is level, as if it were a continuation of the Argentine pampas, which extend as far as the plains of Venezuela, forming forests, prairies, and fields of extraordinary tropical fertility.

The western part is mountainous, having a mild or cold climate, according to the height of the valleys, broken country, or table-lands, where the principal settlements of the Republic are located.

The Andes range, which forms this region, divides in latitude 22° south, and enters the Bolivian territory in two sections, the western or coast range and the eastern or principal range, from which latter separate several branches, running inland until they are lost in the plains of the east.

Between these two ranges is found the high Inter-Andine table-land, with an average altitude of 12,000 to 13,000 feet above the level of the sea, at the northern end of which is situated the great lake Titicaca, and toward the southern or central region Lake Poopó, which receives the waters of the former by means of the river Desaguadero. The extent from north to south of this table-land is about 150 or 200 leagues, with a width from east to west of from 20 to 50 leagues. It is connected on the north with the plateaus of Puno in Peru, and on the south with those of the Argentine Republic. In these regions are found the richest mines of silver, copper, tin, gold, and other minerals.

The central location of Bolivia has retarded the development of its railroads, since it has been obliged to wait until the lines of the neighboring countries should approach its own frontiers before undertaking their extension, as in the case of those from Mollendo to Puno and from Arica to Tacna, in Peru, which still remain idle within their respective limits, and that of the Central North Argentine Railway, which is now nearing Jujui, with every probability that it will be extended as far as the Bolivian frontier.

Topographical and financial difficulties for a long time prevented the

construction of the railway from Antofagasta to the interior, but they have lately been overcome by the Huanchaca Company, of Bolivia, which has succeeded in completing the narrow-gauge railroad between Antofagasta and Uyuni, with an extent of 600 kilometers. The same company has contracted for the extension of this line to Oruro, which is considered a distance of 320 kilometers. The Government guarantees 6 per cent. interest on the capital invested, which is estimated at £500,000 sterling.

The configuration of the territory of Bolivia, and its vast area, give origin to three channels of communication; by way of the Pacific, the river La Plata, and the Amazon, respectively, each one of which is the outlet for a particular region possessing resources of its own of great value, which will rapidly develop as soon as transportation is made cheap and easy by the construction of railroads.

The communications by the Pacific are obtained: (1) by Antofagasta Railway; (2) by the Arica Railway; (3) by the Mollendo Railway.

(1) The Antofagasta Railway, which had to contend against the obstacle presented by an uninhabitable desert, has become practicable on account of the narrow-gauge railway (75 centimeters), which runs from that place to Uyuni, as has been stated. Uyuni is at a distance of 25 kilometers from the rich mines of Huanchaca, 200 kilometers from the city of Potosi, 300 kilometers from the capital, Sucre, and 320 kilometers from Oruro.

The line crosses a very rich mineral region of much promise. Its prolongation to Oruro, with a branch line to Potosi, will tend to further develop the mineral production, which to-day is quite considerable.

(2) The Arica Railway runs a line as far as Tacna (47 miles), whence it is intended to build another to Corocoro and La Paz (about 400 kilometers). This work requires an immense capital, since the road has to ascend the coast range at its steepest part. Traffic is at present carried on by means of mules. This line is connected with the departments of La Paz, Oruro, and Cochabamba, to whose commerce it gives great facilities on account of being the shortest road.

(3) The Mollendo Railway, open to traffic since 1870, has the use of a line which leaves that port, runs through Arequipa, and ends in Puno, covering a distance of 522.96 kilometers, or 320 miles.

Bolivian traffic makes use of this railroad in connection with navigation by steamer on Lake Titicaca and the high-road from Chililaya to La Paz, 14 leagues.

The Peruvian bond-holders, to whom that railroad has been granted, have obtained concessions from Peru as well as Bolivia to extend it as far as La Paz, whence within a short time a road will be run to Oruro, 250 kilometers, in order to form a junction there with the Antofagasta road. It is intended to run a branch line from Oruro to the fertile department of Cochabamba, a distance of 200 kilometers.

The Bolivian part of the railroad from Puno to La Paz extends 150

kilometers from the Desaguadero. The nation guarantees 6 per cent. on the capital invested.

The communications with the river La Plata are carried on by means of the Northern Central Argentine Railroad and by the river Paraguay and the high-road to Santa Cruz.

The extension of the Northern Central Argentine Railroad has already reached Salta and will soon go as far as Jujui, from which place it will be extended to the Bolivian frontier, the Argentine Government having granted a concession for this. It will then be an easy matter to join this line with the Andine of Bolivia by extending it either to Uyuni or to Potosi, in either case a distance of not more than 500 kilometers.

It is proposed to run two railways from the river Paraguay, one from the Gaiva to Santa Cruz de la Sierra, running through the province of Chiquitos, over some 750 kilometers of level country, and another from Bahia Negra to Sucre, with a branch to Santa Cruz, 750 kilometers in level country and 500 in mountainous and broken country.

With these two railroads and another contemplated between Paraná and Tarija, communications will be opened with the river La Plata.

The extensive eastern region of Bolivia, rich in all kinds of tropical products of superior quality, such as coffee, cocoa, sugar, cotton, rice, tobacco, etc., and likewise in gold ore, offers a wide field for industry, commerce, and immigration.

The northern region, which is of wonderful fertility and is irrigated by the rivers Guaporé, Henes, Mamoré, Beni, and Madre de Dios and their numerous navigable branches, which all unite to form the river Madera, the principal tributary of the Amazon, in order to enjoy the full benefits of steam navigation and the products of civilization, requires the construction of a railroad from the Madera to Mamoré so as to avoid the rapids which interfere with navigation on these great rivers; said railway will be, at most, 180 miles long. The survey of this road has been in the hands of a commission of engineers appointed by the Brazilian Government, and its cost has been estimated at not more than \$6,000,000 in gold.

In connection with this railroad, and in order to make communications between the navigable rivers and the cities of the interior of Bolivia, it will be necessary to construct the following supplementary lines:

I. From Rio Grande, a tributary of the Mamoré, to Santa Cruz de la Sierra, 150 kilometers, through level country.

II. From the river Chimoré or Upper Mamoré to Cochabamba, 250 kilometers, through broken and mountainous country.

III. From the river Beni to La Paz, about 500 kilometers, through broken and mountainous country.

Workmen, provisions, and timber for the construction of these railroads are found in abundance in the respective departments of Santa Cruz, Cochabamba, and La Paz, which will derive great benefit from them.

It is estimated that the freight on the materials for these railways, to-

gether with that on the steamers and machinery which will have to be imported for the rivers of Bolivia, outside of the regular commercial traffic, will suffice to give life and impetus for the first few years to the Madera and Mamoré Railroad, whose importance may be compared, without exaggeration, to that of the railroad of the Isthmus of Panama.

SUMMARY.

There is in operation the narrow-gauge railway from Antofagasta to Uyuni, 610 kilometers, whose dividends exceed the guarantee of 7 per cent. interest.

There is under survey and construction the railway from Uyuni to Oruro, 320 kilometers, with a guarantee of 6 per cent. interest, and a term of two years for its completion.

There is under survey a railway to be constructed as soon as the Peruvian section is completed from Puno to the Desaguadero, running from the latter point to La Paz, 150 kilometers, with a guarantee of 6 per cent. interest.

There are in contemplation :

	Kilometers.
The railway from La Paz to Oruro	250
The railway from Oruro to Cochabamba.....	200
The railway from Uyuni to Potosi	200
The railway from Uyuni to La Quiaca, on the Argentine frontier.....	500
The railway from the river Paraguay to Santa Cruz	750
Its prolongation to Suere	750
The railway from the Argentine Paraná and its prolongation to Tarija.....	300
From Rio Chimoré to Cochabamba	250
From Rio Beni to La Paz	500

For illustration there is appended the law of railroads, and several drafts of concessions sought from the government, and a map of the Republic of Bolivia.

JUAN FRANC^o VELARDE.

LEGATION OF BOLIVIA,
Washington, February, 1890.

ACT RELATING TO RAILROADS.

Be it enacted by the Chamber of Deputies :

ART. 1. That the *Huanchaca Company*, of Bolivia, is guaranteed an annual interest of *six per cent.*, for a term of *twenty years*, on the capital which it may invest in the construction of the railway from Uyuni to Oruro. This guarantee shall be obligatory from the time that the railway reaches Oruro.

ART. 2. The estimate and cost of the line shall be verified by the national engineer corps.

ART. 3. The company constructing the railroad shall open it to the public in Oruro within two years from the 1st of January, 1890, paying,

in case it should not then be completed, the fine of *four hundred thousand Bolivian dollars*.

ART. 4. The same annual interest of *six per cent.* is guaranteed, for twenty years, on the capital employed in the construction of a railway from the city of La Paz to the Peruvian frontier in the Department of Puno.

ART. 5. The same interest is guaranteed, for twenty years, on the capital invested in the construction of the railroads from banks of the river Paraguay and the Argentine frontier to Santa Cruz, the Beni, Tarija, and Sucre.

This concession refers only to the propositions presented to the legislature in 1889.

ART. 6. There is hereby granted to the companies constructing the railroads one square league of ground for each league of track laid; this ground to be in alternate lots, the remaining lands continuing to be Government property.

ART. 7. In case those companies should prefer the granting of lands they will not be entitled to the money guarantee.

ART. 8. The stipulations of responsibility for the payment of the granted guarantee shall not in any case affect the present national income.

ART. 9. All further stipulations bearing upon the present act are left to the power of the executive.

Let this be sent to the Senate for its action.

The Hall of the Chamber of Deputies in La Paz, October 27, 1889.

JENARO SANJINÉS,
President.

MARCO D. PARÉDES,
Secretary.

CASTO ROMÁN,
Secretary.

ANICETO ARCE,

Constitutional President of the Republic:

Whereas, the National Congress has authorized the following act:

Be it enacted by the National Congress:

That Mr. W. H. Christy is authorized to build a narrow-gauge railroad from the Desaguadero to the city of Oruro, with the following stipulations:

1. The railway of the Titicaca Company shall start from the highest navigable point of the river Desaguadero and run to Oruro, over the surveyed route approved by the company.

2. The road shall be a narrow one, with a gauge of 1 meter, with steel rails and ties; the rails shall weigh 30 pounds per meter, and the ties shall be placed at intervals of 800 millimeters. The locomotives shall weigh 15 tons, having a draught power of 400 tons and a maxi-

imum speed of 30 miles an hour. The rolling stock shall consist of one hundred and fifty cars and four locomotives.

3. This railroad shall be for freight, but it shall also transport passengers, for which it shall make use of suitable material.

4. The examination of the preliminary surveys shall be begun in the month of May, 1890, and shall be submitted for the approval of the Government on or before the expiration of ten months.

The final work shall be begun three months after the Government has notified the company of its approval of the plan and surveys made. After the expiration of this period, the concession shall be repealed.

5. The company shall be bound to carry the mail-bags gratis, to lower the price of transportation for Government employés 50 per cent., and and for government troops and materials 70 per cent.

6. The Government shall grant to the company, with full unincumbered title, all the land necessary for the road, its stations and necessary adjuncts, as determined in the respective plans.

7. The company shall always have the right of alienating the railroad owned by it, without being subject to other restrictions than those set forth in the act, provided that the Government be previously notified, which shall, conditions being equal, have the right of preference.

8. The passenger and freight tariff shall be fixed by the company, after its approval by the Government.

9. All materials destined for the construction and use of the railroad and its stations and other adjuncts shall be free from Government and municipal (*Octroi*) duty.

10. The employés of the railroad shall be exempt from service in the army and the national police.

11. The Bolivian Government, after the final work on the railroad is over, shall not grant any concession for another railroad through this same route, unless at a parallel distance of 15 miles.

12. The railroad of the Titicaca Company shall be opened to the public in sections of five leagues, according to the proscriptions and formalities of the law, the entire road being completed twenty months from the time the work was begun, or before that if possible.

Let this be forwarded to the Executive.

The Hall of the National Congress, La Paz, October 31, 1889.

SERAPIO RÉYES ORTIZ.

JENARO SANJINÉS.

EMETERIO CANO,

S. Secretary.

MARCO D. PARÉDES,

D. Secretary.

Therefore I promulgate it, that it may be and act as a law of the Republic.

Government Palace, La Paz, November 16, 1889.

ANICETO ARCE,

Minister of the Interior and Industry.

RAILWAYS OF BRAZIL.

REPORT OF J. G. DO AMARAL VALENTE, DELEGATE FROM BRAZIL.*

DELEGATION OF BRAZIL,
Washington, February 27, 1890.

SIR: I have the honor to present to your excellency the accompanying synopsis containing a statement of the number and length of the railroads of Brazil, and of the capital therein invested.

I take this occasion of expressing to your excellency the assurances of my distinguished consideration.

J. G. DO AMARAL VALENTE.

Hon. F. F. VELARDE,

Chairman, Committee on Railway Communication.

Railroad system of Brazil, corrected to January 1, 1888.

Railroads.	Capital.	Length in kilometers.			
		In operation.	Building.	Under survey.	Total.
	<i>Francs.</i>				
Madeira-Mamoré (Estado do Amazona).....	24,500,000	.....	.....	330	330
Belem-Bragança (Estado do Pará).....	14,900,000	59	.....	150	209
Camocim-Sobral (Estado do Ceará).....	25,300,000	129	.....	88	217
Baturité (Estado do Ceará).....	25,900,000	111	.....	84	195
Natal Nova Cruz (Estado Rio Grande do Norte).....	19,975,011	121	.....	.....	121
Conde d'Eu (Estado Parahyba).....	18,333,883	121	.....	18	139
Recife-Palmares (Estado de Pernambuco).....	46,816,479	125	.....	.....	125
Recife-Limoeiro-Timbáuba (Estado de Pernambuco).....	15,437,328	96	46	.....	142
Recife-Caruarú (Estado de Pernambuco).....	22,000,000	76	35	.....	111
Recife-Caxangá (Estado de Pernambuco).....	3,580,000	20	.....	.....	20
Recife-Olinda-Beberibe (Estado de Pernambuco).....	1,400,000	12	.....	.....	12
Palmares-San Francisco (Estado de Pernambuco).....	120,000,000	146	.....	500	646
Ribeirão Bonito (Estado de Pernambuco).....	1,685,393	.....	22	38	60
Itatibense (Estado de Alagoas).....	1,200,000	.....	19	.....	19
Mació-Imperatriz (Estado da Alagoas).....	12,788,326	88	.....	.....	88
Paulo-Afonso (Estado da Alagoas).....	14,300,000	116	.....	.....	116
Jaraquá-Bebedouro (Estado da Alagoas).....	700,000	10	.....	.....	10
Bahia-Alagoinhas (Estado da Bahia).....	44,943,820	123	.....	.....	123
Alagoinhas-Timbó (Estado da Bahia).....	7,443,820	83	.....	.....	83
Alagoinhas-San Francisco (Estado da Bahia).....	38,200,000	322	.....	131	453
Central Bahia (Estado da Bahia).....	38,514,357	299	.....	3	302
Santo-Amaro Tacú (Estado da Bahia).....	6,741,573	36	.....	.....	36
Nazareth Santo Antonio (Estado da Bahia).....	3,511,236	34	.....	138	172
Caravellas-Philadelphia (Estado da Bahia).....	33,707,865	142	251	.....	393
Victoria-Natividade (Estado da Bahia).....	30,600,000	.....	.....	218	218
Itapemirim-Alegre (Estado Rio de Janeiro).....	4,494,382	70	.....	208	278
Campos-Carangola (Estado Rio de Janeiro).....	33,707,865	223	.....	84	307
Campos S. Sebastião (Estado Rio de Janeiro).....	1,685,393	18	.....	.....	18
Macabé-Campos (Estado Rio de Janeiro).....	33,707,685	96	.....	.....	189
Santo Antonio de Padua (Estado Rio de Janeiro).....	.....	93	.....	.....	.....
San Fedelis (Estado Rio de Janeiro).....	5,000,000	.....	20	56	76
Estrado de Ferro Central (Estado Rio S. Paulo, Minas).....	270,855,360	725	.....	.....	725
Estrado de Ferro Central (Estado Rio S. Paulo, Minas).....	45,000,000	61	103	.....	164
Rio do Ouro (Estado do Rio).....	3,271,999	65	.....	.....	65
Rio de Janeiro-Magé (Estado do Rio).....	5,617,977	28	26	34	88
Corcovado (Estado do Rio).....	1,713,674	4	.....	.....	4
Príncipe do Graão Pará (Estado do Rio).....	18,258,427	92	.....	.....	92
Santa Izabel do Rio Preto (Estado do Rio).....	12,668,539	74	.....	.....	74

* Translation.

Railroad system of Brazil, corrected to January 1, 1888—Continued.

Railroads.	Capital.	Length in kilometers.			
		In operation.	Building.	Under survey.	Total.
	<i>Francs.</i>				
Rezende Aréas (Estado do Rio)	6, 179, 775	28		65	93
Ramal de Cantagallo (Estado do Rio)	5, 000, 000	69	17		86
Santa Anna (Estado do Rio)	8, 400, 000	39		17	56
União Valenciana (Estado do Rio)	4, 494, 382	63			63
Rodero Vassouras (Estado do Rio)	350, 000	6			6
Barão Ararúama (Estado do Rio)	2, 250, 000	40			40
Rio das Flores (Estado Rio de Janeiro)	1, 966, 000	36			36
Alcantara-Mariá (Estado Rio de Janeiro)	2, 300, 000		38		38
Ramal Banalense (Estado Rio de Janeiro)	2, 275, 000	12	17		29
Magé Theresopolis (Estado Rio de Janeiro)	5, 618, 000		6	40	46
Leopoldina-Cantagallo (Estado Rio de Janeiro)	110, 449, 438	297			1, 204
Minas-Rio (Estado de Minas Geraes)	43, 525, 992	170			170
Juiz de Fora-Piau (Estado de Minas Geraes)	5, 056, 180	52	9		61
Oeste de Minas (Estado de Minas Geraes)	13, 960, 674	218	103	56	377
Pitangui (Estado de Minas Geraes)	16, 853, 933			242	242
Mogyana (Estado de Sao Paulo)	56, 460, 674	551	188		739
San Paulo-Rio de Janeiro (Estado de Sao Paulo)	29, 957, 865	232			232
Santos-Jundiahy (Estado de Sao Paulo)	68, 664, 170	139			139
Araraquara Rio Grande (Estado de Sao Paulo)	55, 000, 000			531	531
Sorocabana (Estado de Sao Paulo)	33, 707, 865	222	110	44	376
Ituana (Estado de Sao Paulo)	5, 765, 730	220	40	23	283
Paulista (Estado de Sao Paulo)	56, 179, 775	242			242
Bragantina (Estado de Sao Paulo)	6, 516, 854	52			52
San Carlos do Pinhal (Estado de Sao Paulo)	14, 044, 014	264			264
Rio Pardo (Estado de Minas Geraes)	2, 200, 000	36			36
Taubaté-Tremembé	600, 090	9			9
San Paulo Santo Amaro (Estado de São Paulo)	1, 200, 000	20			20
Santos S. Vicente (Estado de São Paulo)	600, 000	9			9
Paranagua-Coritiba (Estado do Paraná)	50, 000, 000	111			111
Dona Thereza Christina (Estado de Santa Catherina)	18, 253, 174	116			116
Taquary-Urugayana (Estado do Rio Grande do Sul)	102, 900, 000	262	112	269	643
Rio Grande Bagé (Estado do Rio Grande do Sul)	41, 814, 831	280	3		283
Bagé-Cacequi (Estado do Rio Grande do Sul)	25, 000, 000			210	210
Quarahim-Itaqui (Estado do Rio Grande do Sul)	19, 975, 031	75	101		176
Perto-Alegre Nova Hamburgo (Estado do Rio Grande do Sul)	10, 000, 000	43			43
Total	1, 555, 916, 159	8, 486	1, 398	3, 597	13, 481

J. AUGUSTO DA COSTA,
Secretário do Delegação dos
Estados Unidos do Brazil.

THE RAILWAYS OF CHILI.

REPORT OF EMILIO C. VARAS, DELEGATE FROM CHILI.*

LEGATION OF CHILI,
Washington, January 9, 1890.

DISTINGUISHED COLLEAGUE: In reply to your favor of the 7th, which I received to-day, and according to the desire therein expressed, I enclose a part of the Statistical Synopsis of Chili in which you will find a list of the railroad lines constructed in Chili and those under construction, together with a table of the length of each in kilometers, and of the points or places which they connect.

To the railroads in construction mentioned in the Synopsis, are to be added the two which in a short time will unite the Central Railroad of Chili and the railroads of the Argentine Republic, and which are being at present constructed between the Andes (Chili) and Mendoza (in the Argentine Republic), and between Zumbel (in Chili) and Bahía Blanca (in the Argentine Republic).

The laying of another line is at present contemplated between Valparaiso and Santiago, and the plan of a railroad between Serena and Tarapacá is being prepared, to which end the Government has asked from Congress the funds necessary. This line will connect with the Central Railroad which already runs to the southern extremity of the Republic.

In the same synopsis you will find the data relating to the cost of construction, transportation of passengers, carriage of freight, etc., of the railroad lines of the State.

As for plans, proposals, and estimates relative to all these railroad lines, they do not exist, as you will suppose, in the records of this legation; they are to be found in the archives of the Direction of Public Works of Chili, and it would not be easy to get them here. I hope, however, that they will not be necessary to the purpose of your committee.

With expressions of my most distinguished consideration, I am, your obedient servant,

E. C. VARAS.

Hon. JUAN FRANCISCO VELARDE,
E. E. and M. P. of Bolivia, present.

[Extract from the statistical and geographical synopsis of Chili.]

DEPARTMENT OF INDUSTRY AND PUBLIC WORKS.

PROMOTION OF INDUSTRY.

The development of industry is being rapidly promoted. The National Society of Agriculture of the capital, and the Southern Agricultural Society, the Agricultural Institute by its principal branches of general agriculture, and the practical schools for its teaching and application, established in the towns of Santiago, San Fernando, Talca, Chillán, Concepción, Vicuña, and Salamanca are all working for this end. The mining industry is receiving equally close attention from the National Miners' Association and the practical schools of this branch kept up in Santiago, Copiapó, and Serena. There is also in the capital a Society for the Improvement of Manufactures, a School of Arts and Trades, and a Bureau of Architecture, devoted to the promotion of manufacturing interest, building, etc.

Lines of railroads of the State now in operation.

	Kilo-meters.	Average cost per kilometer (gold).	Total cost.
Santiago to Valparaíso	187.0	\$69,781	\$13,049,473
Andes Branch	45.0	22,783	1,025,235
Santiago to Curicó	185.0	32,171	5,951,635
Palmilla Branch	39.0	9,820	422,260
Curicó to Chillán	210.9	28,412	5,994,932
Chillán to Talcahuano	187.5	26,436	4,956,750
San Rosendo to Angol	73.0	28,070	2,049,110
Santa Fé to Los Angeles	22.0	28,070	617,540
Angol to Traiguén	72.0	55,982	4,030,704
Renaico to Fort Victoria	75.0	55,982	4,198,650
Roblería to Collipulli	42.0	-----	-----
Chanaral to the mineral springs, Ánimas and Salado	60.0	5,842	350,520

Movement of passengers, freight, and baggage in 1887.

Classes.	Passengers.		Freight.		Value of baggage.
	Number.	Value.	Weight.	Value.	
First	1,112,597	\$793,630.25	<i>Metricwt.</i> 5,026,714	\$1,114,224.46	\$88,308.82
Second	802,354	633,300.00	4,737,339	1,675,518.49	68,443.28
Third	543,359	468,909.05	3,637,939	1,122,943.26	63,925.75
Total 1887	2,458,310	1,900,839.30	13,401,992	3,912,986.21	220,677.85
Total 1886	-----	-----	13,062,575	3,691,727.24	234,106.31
Difference	-----	-----	339,417	221,258.97	13,428.46

The total receipts of the railroads of the State in 1887 were \$6,349,621.30; the expenses amounted to \$4,197,250.66, leaving a clear gain of \$2,152,370.64.

The private lines of railroads in operation are, commencing from the north:

	Kilometers.
From the port of Arica to the city of Tacna.....	63
From the port of Pisagua to Tres Marías, 90 kilometers, and branches to Agua Santa and Puntunchara with sidings	106
From that of Iquique to Tres Marías, 109 kilometers, to Virginia, 31 kilometers, branches to Bodegas with sidings.....	82
From that of Patillos to Salitreras de Sur.....	194
From that of Mejillones del Sur to the Cerro Gordo mine.....	93
From that of Antofagasta, via Salinas el Dorado to the village of Calama, continuing eastward in the direction of the borate deposits of Ascotán on the frontier of Bolivia, and which is to continue some kilometers into the interior of this state to the rich silver mine of Huanchaca.....	29
From that of Taltal to Cachiyuyal or El Refresco	440
From that of Caldera to the city of Copiapó, branching at the mines of Puquios to San Antonio de Apacheta and to Chanarcillo or Juan Godoy.....	82
From that of Lower to Upper Carrizal, via Baranquilla and Canto del Agua, 36 kilometers, and thence 45 more to the Cerro Blanco Mine on the east.....	242
From that of Coquimbo to the city of La Serena and La Compañía	81
From the same to the city of Ovalle with branch to Panulcillo	15
From that of La Serena to Elqui, or to the village of Rivadavia east of the city of Vicuña.....	123
From that of Tongoy to the mine of Tamaya.....	78
From that of Larquete, in the bay of Arauco, to the coal mines of Quilchauquin and Maquegua.....	55
Total	40
Or 1017. 4 miles.	1, 641

RAILROAD LINES UNDER CONSTRUCTION.

The Congress has recently approved a contract made by the Executive with Mr. Newton B. Lord for the construction of the ten lines hereafter mentioned upon the basis of an estimated sum.

The total cost of these works amounts to the sum of £3,542,000 sterling, including in this sum the 13 per cent., to which the excess over the value of the estimates first made amounted.

Only the lines and their distances in kilometers can be noted here, and not the cost of each, because it is not yet known what changes can be made, either in their length or in the alteration of the gauge from wide to narrow, and *vice versa*.

If, for example, the line from Victoria to Osorno be taken, the cost much exceeds the estimates.

The average cost per kilometer, including equipment, etc., is about \$27,000, more or less. Thirteen per cent. may be taken as the average excess of cost over that first estimated; thus, for instance, there are lines, the actual cost of which has been 8 per cent., 13 per cent., and in the case of that between Constitucion and Talca, 28 per cent. over the original estimate.

The following table will give the names of the several lines with the extent of each :

	Kilometers.
Ovalle to San Marcos.....	60
Vilos to Illapel and Salamanca.....	128
Ligua to Calera and Cabildo.....	76
Santiago to Melipilla.....	59
Pelequen to Peumo.....	35
Palmilla to Alcones.....	45
Constitucion to Talca.....	85
Coihue to Mulchen.....	43
Victoria to Osorno and Valdivia.....	403
Huasco to Vallenar.....	48
Total	928
Or 608.84 miles.	

THE RAILWAYS OF COLOMBIA.

REPORT OF MARTINEZ SILVA, DELEGATE FROM COLOMBIA.*

WASHINGTON, *January 10, 1890.*

DEAR SIR AND FRIEND: I send you herewith the information I have been able to collect about the railroads of Colombia. I am expecting a map which I have been advised has been sent, and when I receive it I will take pleasure in forwarding it to you to illustrate the notes appended hereto.

Your obedient servant and friend,

CARLOS MARTINEZ SILVA.

Mr. JUAN F. VELARDE,

Chairman, Committee on Railway Communication, Present.

RAILROADS IN COLOMBIA.

The Republic of Colombia has a population of 4,000,000 inhabitants, with an extent of territory of 13,310 square myriameters, of which 10,354 are uncultivated.

The population is densest along the Atlantic coast, and especially in the interior of the country in the high regions where the climate is mild and healthy and the soil suitable for agriculture.

The highway for communication with the exterior is the River Magdalena, which waters seven of the nine departments into which the Republic is divided, and empties into the Atlantic through the two mouths *Ceniza* and *Rio Viejo*. The Magdalena is navigable for vessels of small draught (3—3½ feet) from a little below Honda to Barranquilla. This part of the river is called *Lower Magdalena*. In the dry season its waters diminish greatly, rendering navigation difficult and even dangerous, at least between Honda and the point called Nare. The *Upper Magdalena*, that is to say, from Honda to its source, is also navigable to a great extent (between Honda and Neiva), but there the scarcity of water during a large part of the year is still more noticeable, which renders navigation very irregular and dependent upon circumstances.

The Magdalena being the principal highway of Colombia, and traversing the richest and most populous departments, it is easily understood that the tendency there has been to connect this river with the principal

centers of production and consumption. For this reason there is nothing in Colombia corresponding to a *railroad system*; the existing lines, those under construction, and those contemplated are all short, isolated, and independent.

From the first the need which was most urgently felt there was that of communication between the capital of the Republic (Bogotá) and the Magdalena. With this in view, the construction of a railroad was commenced which was to connect Girardot, a port on the Upper Magdalena, a little above Honda, with the table-land on which Bogota is situated (9,000 feet above the sea level). Of this road some 40 kilometers are already constructed, and there remain about 45 more to be built to connect it with the railroad on the plain of Bogota, between that city and Facativá ($37\frac{1}{2}$ kilometers), at the branch line running southward towards the aforesaid railroad of Girardot. The part of this work yet to be finished is relatively the most difficult and expensive, since it must ascend the cordillera, which, as may be deduced from the height of Bogotá, is very high and abrupt.

Even when this road is completed it will not be of great utility for outside trade, since it does not avoid that part of the Magdalena which is most liable to accidents and dangers on account of low water in the river during a large part of the year, and since it requires a transshipment at Honda, where there is a rapid which interrupts navigation between the Upper and Lower Magdalena.

To partly avoid this difficulty another short line of railroad has been constructed, called the *Dorada* ($23\frac{1}{2}$ kilometers), between a point below Honda and another above that city.

The *Antioquia Railroad* starts from Puerto Berrio, on the Magdalena, and runs to Medellin, capital of the rich and densely populated department of Antioquia. Fifty kilometers of the most difficult and expensive portion have been constructed. This railroad belongs to the Government of the department, which is disposed to make very liberal offers for its completion. It would be a fine investment for foreign capital.

Another very important line, and one which would yield large dividends, would be the one which would connect the city of Bucaramanga with the River Magdalena. Bucaramanga is the capital of the rich and industrious department of Santander. It is one of the most prosperous cities of the Republic, and is the center of a region which produces large quantities of excellent coffee. The road would be a short one, has been accurately surveyed, and its construction offers no great difficulty.

Another line of railroad is that which runs from Barranquilla, on the Magdalena, to Puerto Colombia on the Atlantic (22 kilometers), which is the place where to-day the greater part of the exports and imports of the Republic are made. The construction of this railroad was made necessary because the mouth of the Magdalena called Ceniza is unnavigable on account of the sand-banks formed there in the struggle between the waters of the river and the sea.

Nevertheless, Puerto Colombia, is not, and never can be, a convenient port, because vessels have to anchor at a considerable distance from the shore.

The best ports of Colombia on the Atlantic are Cartagena and Santa Marta, but the latter city, once very important on account of its communication with the Magdalena, has eventually become cut off from it. An attempt is now being made to re-establish this communication by means of a railroad of which 45 kilometers have already been built. It is under the direction of a private company, backed by European capital.

Those just enumerated are the railroads which communicate with the Magdalena.

Completely independent of these are three others :

That of *Panama*, which crosses the Isthmus between Colon and Panama ($76\frac{1}{2}$ kilometers).

That of *Cúcuta*, between that city (which is the southern-most one of the republic), on the frontier of Venezuela, and the river Zulia, by which is exported all the coffee of that part of Colombia and the neighboring states of Venezuela. It is 55 kilometers long, and is an excellent line, constructed with domestic capital and by native engineers, as was also that of the table-land of Bogotá.

That of the *Cauca*, starting from the port of Buenaventura and running to Calí, a very important city of the highly fertile valley of the *Cauca*; 21 kilometers of this have been laid, and a European company has recently taken charge of its completion.

From what has been set forth it may be concluded that what Colombia most needs to-day is to construct or finish lines connecting Bogotá Bucaramanga, and Medellín with the Magdalena. A railroad which would ascend this river from Cartagena to Bogotá would obviate all the difficulties of that slow and uncertain navigation. The work would not present serious difficulties of engineering, and would rapidly open up the immense tracts situated along the river, which are exceptionally fertile and rich in all kinds of woods and vegetable products.

As for a railroad to go through Colombia toward the southern republics, I believe that the only possible route would be that of the Lower Magdalena, ascending to Bogotá, crossing the eastern chain, of easy access at many points, and then descending to the immense plains which form the basin of the Amazon and its affluents. Such a work would be colossal in its extent, and would have to be carried through a region of unbroken wilderness, although of a fertility beyond belief. At all events, the enterprise would be worthy of the skill and daring of the people of the United States.

CARLOS MARTINEZ SILVA,
Delegate from Colombia.

WASHINGTON, January 10, 1890.

THE RAILWAYS OF COSTA RICA.

*REPORT OF MANUEL ARAGON, DELEGATE FROM COSTA RICA.**

WASHINGTON, *January 5, 1890.*

SIR: In accordance with our conversation relating to the commission, over which you preside so ably, charged with making a report to the above-mentioned congress upon the railroad communications in Spanish-American countries, I have the honor to transmit the following data, wherein I have tried to condense the information concerning Costa Rica's interests in that important question.

The Republic of Costa Rica is situated on the southern part of Central America, between 8° and $11^{\circ} 16'$ north latitude and $81^{\circ} 40'$ and $85^{\circ} 40'$ west longitude, Greenwich meridian. Its territory covers an area estimated at 25,000 square miles, and its limits are as follows: On the north and east it is bound by the Republic of Nicaragua and the Caribbean Sea; on the south and west by the Pacific Ocean and the State of Panama, in the Republic of Colombia.

The Cordillera of the Andes passes through the country from northwest to southeast, and from it are separated the mountains which cross it in every direction, thus forming high lands, immense valleys, and extensive coasts, leaving the territory divided in three different regions: the high-lands, those lying between them, and the slopes of the mountains, and those formed by the coasts in extensive and extremely fertile plains.

The Cordillera of the Andes bears various names in Costa Rica; a part of it, called Mountain of Dota, occupies the central portion of the territory; others are named the Poás and Barba Mountains, which meet on the summits of Irazu and Turrialba and end on the Atlantic coast. Those of Poás and Barba stretch a little toward the north. On the south of Turrialba and on the east of Dota rises the peak of Chirripó, and on a line almost parallel with the littoral of the Atlantic continue the mountains of Lyon (Ujumb), Pico Blanco (Kanzie), Pico Rovalo, and the Cordillera of Chiriquí. On the northwest side, with the mountains of Poás, follows the chain forming the hills called Los Guatusos, Tilarán, Cerro Pelado, Tenorio, Miravalles, Rincon de la Vieja, and Orosi. Another important range extends from the mountain of Herradura and joins the great mountain of Dota on the eastern side; between both points are comprised the plateaus of Turrubales, Puriscal, and Candelaria. In that manner the principal altitudes of Costa Rica meet together, and are divided throughout the country in numerous

and varied regions, among which attention must be called to the mountain of Aguacate (formerly called Terroto), celebrated for its mineral wealth, especially in gold and silver.

The several heights referred to have been measured and the following is the result:

	Feet (English).
Pico Blanco.....	11, 800
Volcano Irazu.....	11, 500
Volcano Turrialba.....	11, 350
Volcano Poás.....	8, 895
Volcano Barba.....	8, 700
Pico Rovalo.....	7, 012
Alto Chomozo.....	5, 265
Volcano Orosi.....	5, 200
Miravalles.....	4, 700
Mountain Aguacate.....	4, 132

The whole territory is crossed by rivers and small streams bringing fertility everywhere, and offering great inducements to various industries, which will find sufficient motive power in the currents for all kind of machinery.

The principal rivers coursing toward the Pacific are the Tempizque, which, uniting the waters from almost the entire province of Guanacaste, empties into the Gulf of Nicoya. That river, like a great many of its tributaries, is navigable for many miles for boats drawing 4 or 5 feet of water. Then comes the Barranca River, which empties east of Puntarenas, the Jesus-Maria River, and the Rio Grande, all of which empty in the same Gulf of Nicoya. The Pirris, Naranjo, Savegre, Baru, and Rio Grande de Terraba empty directly into the Pacific Ocean. The Dulce, El Coto, Pavon, and other rivers of lesser importance flow into the Gulf Dulce. The Frio River, navigable to a considerable distance, empties into the Lake of Nicaragua at the very place where the San Juan River begins. The Zapatero, Viejo, Negro, and Platanares Rivers also empty in the same lake. The San Carlos and Sarapiqui are tributaries of the San Juan, whose course runs between Costa Rica and Nicaragua toward the Atlantic. The Sucio River is divided between the Sarapiqui and the Colorado, thus facilitating the communications with an extensive territory.

In the Caribbean Sea, or of the Antilles, empties directly the Colorado River, which in its widest part receives the waters of the San Juan and to its outlet on the Atlantic; the Parisimina, wherein the Reventazon empties itself, and whose source is southwest of Cartago; the Pascuara and Matina, communicating together by great creeks, and the Toro or Morin. All these rivers are situated on the northern side of Port Limón, as well as the Penitencia, Suerte, Palacio, Tortuguero, and Sierpe, of smaller importance, which empty in a creek communicating with the Sea of the Antilles at the point called Tortuguero. South of Port Limon, empty the Limon, Banana, Bananita, and

other shallow rivers. The Telire or Sixola River passing through a great tract of land, and the Tilorio or Chanquinola, celebrated under the name of the Estrella River, empty in a more southerly direction after irrigating with its numerous tributaries the important territory of Talamanca. The Bananas, Barras, Rovalo, and other rivers of little consequence empty in Admiral Bay.*

The climate of Costa Rica is remarkably mild and healthful. There is no extreme heat or cold, neither are there endemic or virulent diseases. The mean temperature in the high-lands is from 14° to 20° centigrade, and from 20° to 26° on the coast.†

It can be said that there are but two seasons; the dry one and the rainy one. The first is from November to May; in the latter the rain generally begins and lasts until November. In either of those seasons the sun rises, with a difference of a few minutes, at six in the morning and sets about the same time in the evening.

Storms, cyclones, and hurricanes, which in other localities cause so much damage, are unknown in Costa Rica, nor is there any danger of inundations on account of the heavy rains, owing to the peculiar configuration of the country.

The present population of the Republic, according to the report of the Bureau of Statistics for 1888, is 205,000 inhabitants of European origin; the homogeneity of the white race of Spanish descent being very notable. There are neither negroes nor Asiatics, and the Indians are in so small a proportion that they are not considered important enough to be mentioned in the census. The number of foreigners residing in the country can be estimated at 8,000, and is composed mostly of Germans, French, English, and North Americans.

The principal port of Costa Rica on the Atlantic is Limon, situated about 10° north latitude, and $83^{\circ} 4'$ west longitude, Greenwich meridian. On the Pacific the principal port is Puntarenas, on the Gulf of Nicoya, and is also about $9^{\circ} 58'$ north latitude by $84^{\circ} 46'$ of same longitude; the distance, therefore, in a straight line between the two ports being $1^{\circ} 42'$, or from 102 to 103 geographical miles.

The Republic is divided into five provinces and two *comarcas*, and the principal cities are situated as follows:

Provinces.	Cities.	Latitude north.	Longitude west.
San José	San José	o "	o "
Cartago	Cartago	9 56	84 6
Heredia	Heredia	9 54,	83 58
Alajuela	Alajuela	9 50	84 9
Guanacaste	Liberia	9 59	84 15
Comarcas:		10 32	85 15
Puntarenas	Puntarenas	9 58	84 46
Limon	Limon	10	83 4

* Costa Rica in 1886, by J. B. Calvo.

† Costa Rica y su Futuro, by Paul Bionlley.

The cities of Alajuela and of Heredia are northeast of San José, at a distance of 7 and 14 miles (English) respectively; and Cartago, south-east of the above-mentioned city of San José.

These cities are the most important of Costa Rica, and their heights above sea-level are as follows:

	Feet.
San José.....	3,868
Cartago	4,930
Heredia	3,786
Alajuela	3,001

From the total of the population corresponding to each of the provinces, according to the division previously made, the number of inhabitants is as follows:

San José.....	64,000
Alajuela	51,000
Cartago.....	34,000
Heredia.....	29,500
Guanacaste	16,000
Puntarenas	8,500
Limon	2,000

The principal products of Costa Rica consist in coffee, dye and cabinet woods, bananas and other fruits, hides, skins, mother-of-pearl, sarsaparilla, cocoa-nuts, etc.

The value of the importations of foreign merchandise in 1888 amounted to \$5,203,000, corresponding to an average of \$25.30 for every inhabitant; and the exportations during the same year were \$5,714,000, or an average of \$27.87 per capita.

Of the value of the importations, those from the United States represent a sum of \$1,794,000, equal to about 33½ per cent. of the whole importations; and the value of the exportations to the United States was \$2,077,000, or about 36½ per cent. of the total value of the exported products.

The importations from the United States to Costa Rica consist mainly in cotton goods, tools, machinery, and provisions. The exportations from the latter to the former are principally coffee, fruits, hides, skins, and India rubber.

The national revenues in 1888 amounted to \$3,687,595, a sum which, divided among the population according to the calculation made, gives an approximate contribution of \$18 per inhabitant.

The roads in Costa Rica are national and municipal. The national are those which communicate with the principal centers of population, and the latter with the ports of entry. Their construction and maintenance are paid out of appropriations made by the state, and for this reason are controlled by the Minister of Fomento. The municipal roads are those which connect the smaller populations with the larger ones or with the principal cities, and extend their branches in every inhabited or producing locality. These roads, for the most part, are splendidly built, and would be thought admirable everywhere.

The cities of Cartago, San José, Heredia, and Alajuela, besides their extensive and contiguous roads and national highways, connect with each other by railroad, and the trains, at present, make three regular daily trips between the 28 miles which separate the former from the latter cities.

The railroad called the Atlantic line, starts westward from Port Limon and arrives at Reventazon, thence branches off in two directions, one southwest, to connect with the Central Railroad running between Cartago and Alajuela already referred to; and the other, going northwest, crosses the fertile plains of Santa Clara and, for the present, terminates at Carillo. The plain of Santa Clara contains a great number of valuable banana plantations, stock farms, etc.; the same can be said of the Valley of Matina, west of it, and the favorable locality for the cultivation of cacao, which produces a crop of excellent quality.

The length of the railroad from Limon to Cartago is 95 miles, and from Limon to Carillo about 72 miles, due, in both cases, to the sinuosities of the ground near the ascent toward the interior.

From Cartago to Puntarenas, on the Pacific, there is a magnificent national highway, very uneven at the part crossing the summit of the mountain of Aguacate, but which continues in that direction for the purpose of maintaining easy communications with the rich gold and silver mines that are exploited in that mountain so favored with great mineral wealth. The height of the summit of that mountain, where the road referred to crosses it, is 4,132 feet above sea-level. There is between Alajuela and Puntarenas quite a number of small populations, and, among them, three important towns, such as Atenas, situated at 2,380 feet above the sea; San Mateo, at 1,050 feet, and Esparta, at 718 feet.

From Esparta to Puntarenas, besides the highway the first section of 14 miles of the railroad of the Pacific line has been constructed and is now in operation.

From Esparta to San Mateo the distance will be 12 miles; the same from San Mateo to Atenas, and from Atenas to Alajuela. The total number of miles of the highway from the latter city to the above-mentioned port is over 50 miles long on account of the uneven road across the mountains.

There is another highway which had been very important for the communications with Limon by the railroad ending at Carillo. It is the one starting from San José in the direction of La Palma, crosses that height at 5,000 feet above the sea, and descends to Carillo, which is only 1,400 feet high. That highway is 25 miles long, and it must be observed that in a distance of $17\frac{1}{2}$ miles separating the two places referred to the difference of the level between both is 3,600 feet.

There was always a project of an interoceanic railroad. The national congress made an appropriation of \$25,000 for a final survey of the part to be built between Alajuela and Esparta, and the Govern-

ment received proposals for its construction. It is also intended to build a branch to the port of Tivives, though not a port of entry, but which could be made one, owing to its excellent conditions of security and for its facilities.

A new railroad is nearly completed, which is to run across the regions of the country that excite the most the desires of the settlers on account of the great abundance of beautiful cabinet woods, dye-woods, and timber to be found in those localities, as well as for the richness of the soil for agricultural pursuits. That line is to start from Jimenez, on the Atlantic Railroad, nearly $10^{\circ} 10'$ north latitude, and $83^{\circ} 45'$ west longitude, Greenwich meridian; taking a north-northwest direction, it will cross the Sarapiquí River at the point called El Muelle, or at another more or less immediate; thence taking a northwest direction it will continue to the Frio River at its entrance on the Nicaraguan territory.

This new road will open, as already stated, one of the richest regions of the country, and though the hope that the interoceanic canal may be constructed within a few years, or that the realization of that great enterprise may be delayed longer, the railway from Jimenez to Frio River will give life to and develop many important undertakings. Even supposing that the lands should not be, as they are in reality, adapted to every kind of cultivation, the fact alone of facilitating the exploitation of the forests which, to-day, contain an immense amount of India rubber and other trees of different species, as already said, would justify the efforts made by the Government for the construction of the line alluded to.

Upon the accompanying map has been marked, in black, the probable direction which the said railroad shall follow. Its length will be about 80 or 90 miles from its starting-point.

The land communication with Nicaragua begins at a place called La Barranca, close by Esparza; crosses the entire Province of Guanacaste, a distance of 90 or 100 miles, and, though in the dry season the traffic is made by carts, during the rainy one it can only be carried by means of beasts of burden, owing to the even surface of the road, which does not give to the waters a sufficient incline to run off, nor absorb them quickly enough to make it passable.

In a southwest direction, starting from Candelaria, south of San José, and partly following the Pacific coast, there is a bridle-path that passes through the land occupied by the native population of Terraba and Boruca, and ends on the Colombian frontier. The length of that path, crossing through places almost depopulated, added to the facilities of communication by steam with Panama, causes the traffic to be made by sea to Colombia instead of by the road referred to.

There is a path which starts from Angostura, east of Cartago, and leads to the localities southeast of the territory inhabited by the Indians of Talamanca, who use it only on account of its being more easy and accessible to those distant regions by way of Limón and Puerto

Viejo (Old Harbor), being near that point, and with which they communicate by a bridle path.

The distance of the railroad from the Atlantic to the frontier of Colombia, can be calculated at 120 miles in a direct line; but, were it a question of a railroad between both places, the length could not be estimated at less than 150 miles, owing to the configuration of the land and to the consequent deviation from the straight line.

PROJECT OF A RAILROAD THROUGH THE LENGTH OF THE COUNTRY.

From the preceding remarks, it is clearly seen that the railways constructed in Costa Rica follow a transversal direction from the one to be taken by the projected line lengthwise of the continent, and that only the road from Jimenez to the Frio River could form a part of that great line if, touching it on the Costa Rican territory on the northern frontier, it was directed or laid toward the Frio River; but, as the railway system in Nicaragua tends toward Granada, it can not be indifferent to that republic to connect the city of Rivas with that railroad, it is natural to suppose that, in such a case, the line would reach Costa Rica west of the Lake of Nicaragua, and the track run south, more or less parallel with the shore of said lake and join the road of Jimenez to the Frio River.

But leaving the latter supposition and taking for granted that from the northern shore of the above mentioned lake, the railroad shall pass south of Costa Rica, that Republic would see with great interest the intercontinental road cross the territory of Guatusos to its connection with the Jimenez and Frio River line branch, already referred to, on account of the immense advantages to be derived from the opening of these extensive and rich lands. Besides the economy of construction, the enterprise would find ample means of sustenance, according to the natural features of the soil, all offering every desirable condition as to the cost, as well as to the interests it would develop.

The extension of that part of the road, about 60 or 65 miles, would give an impulse to all the natural resources, as well as to a thousand various undertakings that would be started, not only on the plains of Guatusos, but also on those of San Carlos, to which would be added the movement of the great interests already existing in the region of Santa Clara. By that connection, the expenses of the construction of about 80 miles of the proposed transcontinental railway would be more economical.

Supposing the above idea be accepted, and establishing Matina as the starting point south, the southeast line would extend about 120 miles toward the frontier of Colombia and pass through very fertile lands, where there is an abundance of timber, brush-woods, etc., and a great variety of minerals. It results, therefore, that the railroad from the limit of Nicaragua, following the Atlantic coast to the frontier of

Colombia, would cross the territory of Costa Rica on a line of about 200 or 220 miles long.

A similar project, to be realized on the Pacific side, would include something like 50 miles more than the preceding one; that is to say, between 250 and 260 miles in length, and much nearer to the Pacific coast, so as to follow it almost on a parallel line, but it would not pass through such rich localities, nor offer such a bright future like those above mentioned.

I considered proper to transmit to you the data contained in this communication, bearing upon the topography of the country, so as to convey an idea of the position of the Cordilleras and principal mountains, in order that their configuration may be well understood; and by this means help to decide upon the most convenient line for the projected transcontinental railroad passing through the Costa Rican territory. In the same manner I have thought useful to furnish the statistics in this report, as they indicate with sufficient correctness the resources upon which the Republic relies to day. From them, therefore, it will be easy to judge of the development they would receive in a given time, impelled forward by an enterprise of such magnitude. In regard to the position of the existing railroad lines, the accompanying map will help to show it.

There remains but one more observation, and it refers to the number of inhabitants in Costa Rica, which has been calculated upon the most exact figures furnished by the Bureau of Statistics; and, as you are well aware in making a census there are often many errors, owing sometimes to unavoidable omissions, that of Costa Rica, being made quite a long time ago, does not contain the indigenous population; nor has another edition been published for some years past to make the necessary corrections. For this reason the actual population is estimated at not less than 225,000 inhabitants, according to the opinion of various writers well acquainted with the country; still, it ought to be estimated higher if the relation which always exists between the total of inhabitants and the number of soldiers and that of children attending schools is taken into consideration.

In the hope that what precedes will prove of some use to you, I have the honor to be, sir,

Respectfully, your obedient servant,

MANUEL ARAGÓN.

Hon. Sr. Don JUAN F. VELARDE,

Delegate from Bolivia to the

International American Congress, present.

WASHINGTON, January 13, 1890.

SIR: In answer to your favor of the 7th instant, I have a great pleasure in transmitting herewith the information you were pleased to in-

dicate, thus supplementing that contained in my communication of the 5th instant.

The cost of constructing railroads in Costa Rica varies, of course, according to the conditions of the lands they have to pass through, the value of private property to be expropriated, and the topographical difficulties to overcome in different places; but judging from past experience the highest cost could be estimated, at the most, between \$60,000 and \$70,000 per mile, equipped with its corresponding rolling-stock, machine shops, and other necessary appurtenances. It must be observed that the present lines cross the Cordillera, and that until now none has been constructed running parallel to it.

The general traffic at the ports of the Republic, taking as a basis the quantity of imported merchandise and exported products, not only in the rough weight, but also in the bulk or capacity as when received on board the vessels, could be estimated at 66,500 tons, and the traffic of the interior, though its importance is not entered on the official records, could be put at 40,700 tons.

About 50,000 tons of the general traffic are carried by the Atlantic Railroad, and should it increase in proportion to the progressive development of the country during the past five years it can be expected that within the same lapse of time it will augment at least 40 per cent. of its actual importance.

The freight per ton by the line above mentioned is \$17 in American gold.

The earnings from the freight and passengers deducted from the corresponding expenses give an annual profit of over 10 per cent. on the invested capital.

I have the honor to remain, sir, your obedient servant,

MANUEL ARAGÓN.

Hon. Sr. Dn. JUAN F. VELARDE,

Delegate from Bolivia to the

International American Congress, present.

THE RAILROADS OF ECUADOR.

REPORT OF MR. J. M. P. CAAMANO.

My VERY DISTINGUISHED FRIEND AND COLLEAGUE:

In accordance with your request that the various Delegates composing the Committee on Railroads furnish some data relative to railroads in their respective countries, I have the honor to give the following :

The construction of railroads in Ecuador began in 1872 under the administration of Mr. Garcia Moreno by commencing the road of Yaguarachi, to place the coast provinces in connection with the capital of the Republic and the provinces to the east and north of Guayaquil. Various difficulties made this work slow, and during said administration up to 1875 about 70 kilometers, to a point called "Barraganetal," were built. Afterwards, during the administration of Presidents Barrero and Veintimilla, the same line was extended to the vicinity of the Chimbo River that marks the limits of the coast lands and the beginning of the Cordilleras of the Andes. Later on, and under the administration of the undersigned, work was renewed on the line from February, 1884, to June, 1888, by virtue of a contract entered into with Mr. Marcus J. Kelly and by the executive power, and approved by Congress in 1885; according to which, 82 additional kilometers were to be constructed from Chimbo to Sibambe.

The contractor has encountered many obstacles, the principal one being lack of laborers; for Ecuador has only a population of 1,500,000 inhabitants; and as the agricultural industry absorbs most of the workmen, it is difficult to find any considerable number of hands. At the commencement, the contractor associated with him some Guayaquilian capitalists, and with them secured a loan in Europe; but this loan has not proved sufficient, and to-day they are making arrangements to overcome all obstacles and finish the contract. The road being once finished to Sibambe, and the serious difficulty of passing over the western range of the Cordillera surmounted, the prolongation of the line some 300 kilometers, more or less, to the capital is very practicable.

A syndicate of European capitalists have made a proposal to the Government, which, among other things, contemplates the finishing of the railroad alluded to, not only to the capital but to Ybarra, an important city situated about 90 miles to the north of Quito.

It is not possible for me to assure you that this proposed plan will be realized; but I know that the President, devotedly interested in the progress of the country, has called an extra session of Congress that

will assemble on the 15th of May and will interest itself principally in this matter.

From Sibambe to Quito and thence to Ybarra this line will encounter less difficulties to construct; because in the provinces of the interior the climate is healthy, and it is easy to obtain workmen. Moreover, wages are very low, and the railroad can take in its line some sections of a wagon road we have, having a length of some 200 kilometers. This wagon road, on account of its width, accommodation, and one hundred and sixteen bridges (among them are true works of art), it can be said, is one of the best roads in the world. There are a number of contractors ready to undertake the construction of a road from Sibambe to Quito, and I have no doubt but that a contract will be made before the conclusion of the year. This line would open up a wide field for the development of fertile lands, and very rich are those lying between the two ranges of the Cordilleras. This section is the center of a population noted for agricultural pursuits, and comprising such towns as Alausi, Chimbo, Guaranda, Riobamba, Guano, Colta, Ambato, Pelileo, Patate, Pillaro, San Miguel, Satacunga, Machachi, Chillo, Quito, Cotacollas, Pomasqui, Puenbo, Tumbaco, Otavalo, and Ybarra.

There are about 100 kilometers of railroad constructed up to date in this line, the most important of all.

Between Chimbo and Sibambe the greatest difficulty is encountered in constructing the railroad of the south; because there must be passed over a great part of the western chain of the Andes, and the road must climb up to an elevation of 3,000 meters in a distance of about 50 kilometers; for which it has been necessary to attain a grade of 82, crossing over enormous precipices, rocks, and wide rivers. This accounts for the slowness in carrying on such a colossal work that rivals or exceeds, perhaps, the road built on the lands of Oroya in Peru.

In order to comprehend the magnitude of those obstacles, it is sufficient to state that the contract with Mr. Kelly was fixed at \$145,000 per league, and this sum, although seemingly high, does not cover the expenses of construction, according to documents and publications I have among my papers.

On the 9th, of April, 1884, the Ecuadorian Congress made a law authorizing the executive power to appropriate \$300,000 for the construction of a railroad of Manabi, a province of the Pacific coast, and in August, 1887, a contract was made with Mr. Ignacia Palao to construct said line, which to-day is being built, with strong subsidies which the Government gives, and a loan obtained from European capitalists. This road commences from the bay of Caraquez, and crosses a region of exuberant fertility, and has but little obstacles along the proposed route. The length of the road will be 400 kilometers, more or less, and connects the rich and industrious province of Manibi with the capital of the Republic.

The province of Rios, Guayas, and Esmeraldas are washed by a net-

work of large and small rivers, the greater part of them navigable ; and their valuable products are carried by a large number of steamers that ascend these rivers to points that seem almost inaccessible. The laws of the country that open up the country and give facilities have served as a stimulus for various companies ; and these, due to keen competition, have so lowered the rates on freight and passengers as to come within reach of all ; thus giving an accommodating, quick, and cheap service. Notwithstanding this condition of affairs, a contract was awarded to Mr. Joseph Theakston to build railroads in the province of Bío Bío in order to give a greater facility of communications, and for the transportation of fruits, among them being that of cacao, which in this province alone amounts to some millions annually.

In March, 1884, another concession was given to Mr. Antonio Meina to build a railroad between the cities of Machala and Cuenca, and which is about 180 kilometers in length. To-day, this contract is in the hands of the family of Mr. Juan B. Dávila, whose heirs are endeavoring to arrange amicably the difficulties that had arisen, due to the recent demise of the contractor. This line shall pass through Azogues and join the three provinces of Oña, Canar, and Azuay. In May of the same year, a concession was also made to Messrs. Muñoz and Wilczynska for the construction of another line between Santa Rosa and Zaruma, districts in the province of Oña. The length of this road is only 40 kilometers, but it runs through the rich mineral districts of Zaruma whose ore is of high fineness, and employs the work of a multitude of mining enterprises that are constantly being established with native and foreign capital, under the sanction of the most liberal mining laws, that I had the satisfaction to approve in August, 1886.

About the middle of the year 1887 a contract was made with Mr. Marcus J. Kelly to establish a railroad between Durán and Yaguachi. It is about 22 kilometers long. It is finished and in running operation, costing \$650,000.

In the same year Mr. Francisco Wyte Wiswell made a contract to build a railroad between Ybarra and Pailón, in the province of Esmeraldas. This road is from 110 to 125 kilometers long ; and if it should be built, or better, I should say, when it is built, will give an outlet for the valuable products of the provinces of Ymbabura and Carchi that are situated on the boundaries of Colombia.

As a counterbalance to the material obstacles that the accidents of the land in Ecuador present for the construction of railroads, we have, on the other hand, the advantages that our forests abound in indestructible woods for railroad ties and other things ; that the narrow-gauge system is adopted, and that in our contracts we cede lands of the first quality and large area, and that our laws accord protection and privileges of positive importance.

The present epoch of peace that the country enjoys, the path of progress that its able ruler follows, and the foreign credit which undoubt-

edly shall remain solidified by the legislature, which for that object is going to assemble, leads us to hope with foundation that the public works initiated by the preceding administration will be carried out and new ones inaugurated in accordance with the demands of the present century, in which the prosperity of the people spreads itself on wings of electricity and carries forward its march by means of railroads.

Your obedient servant and friend,

J. M. P. CAAMANO.

Hon. Mr. J. F. VELARDE.

84°	8	79	78°	77°	19°
					18°

To accompany the Report of the United States Delegates

MAP
OF THE
AMERICAN ISTHUSES
SHOWING THE PROPOSED LINES FOR AN INTERCONTINENTAL RAILWAY
AND
THE VARIOUS LINES PROPOSED FOR
INTEROCEANIC COMMUNICATION.
1889.

BASED UPON MAP COMPILED BY REAR ADMIRAL C.H. DAVIS U.S.N. 1866.

EXPLANATIONS.

Proposed Intercontinental Line.
Lines.
Lines of Road Roads in operation.
Boundaries.





THE RAILWAYS OF GUATEMALA.

REPORT OF FERNANDO CRUZ, DELEGATE FROM GUATEMALA.

MEMORANDUM OF RAILROADS IN THE REPUBLIC OF GUATEMALA.

There are only two lines constructed and in actual operation in Guatemala: that which starts from the capital and terminates at the port of San José, and that which connects the city of Retalhuleu with the port of Champerico. The first is 70 miles long, and is owned by a North American syndicate. Negotiations are now pending looking to its purchase by the Government. The extent of the second is 27 miles; it belongs to Guatemalan capitalists.

Some time since a contract was made for a branch line, which, starting from Old Guatemala, would unite with the aforementioned lines. The company commenced the work, but it is now paralyzed.

The greatest work which the Republic has in view is the construction of the Northern Railroad, which will begin at the capital and end at the Bay of Santo Tomas on the Atlantic, crossing through extensive territories, fertile and rich in natural products, and providing the important cities and agricultural centers of the country with a natural road, short and cheap, for the commerce of Europe and the United States. This line, connecting with that from Guatemala to San José, will constitute a great interoceanic road. Its total cost is calculated at from \$8,000,000 to \$9,000,000. The Government has already contracted with a French syndicate for its construction, but it is not yet known if this syndicate can carry out its agreements.

The Northern Railway constructed, its most important branches will be to Santa Ana, in the Republic of Salvador, furnishing an outlet by the Atlantic for the fruits which that country produces; to Mazatenango or Retalhuleu, in the western district, to connect the most valuable agricultural belts of the Republic with the interoceanic line; to Coban, on the northern coast, an important coffee center; and to the capitals of the eastern districts.

Other important lines would be those which should connect the Port of Ocos with the agricultural centers of Costa Grande, and Cuca, of Tumbador, and of San Marcos in the western districts.

We might connect with Mexico by means of a railroad run by way of the Pacific coast to the frontier of both Republics. One which should

be built crossing the extensive and sterile district of Peten would be enormously expensive and of difficult execution.

A line which should connect us with the Republic of Honduras, besides being unprofitable, would be difficult and costly.

The other railroads which the country needs for its development are of less importance than those here indicated.

FERNANDO CRUZ.

THE RAILWAYS OF HONDURAS.

REPORT OF JERONIMO ZELAYA, DELEGATE FROM HONDURAS.*

WASHINGTON, D. C., *January 12, 1890.*

ESTEEMED COLLEAGUE: It gives me pleasure to reply to your polite request by furnishing you with information relative to Honduras desired by the Railroad Committee, of which you are chairman.

Honduras is situated between the thirteenth and sixteenth parallels of north latitude, having 250 miles of coast on the Atlantic, and 60 on the Pacific, with magnificent harbors on both oceans. Being favored with peculiar advantages for the construction of an interoceanic railroad, gifted with a healthy climate, and possessing varied and abundant natural resources, it finds itself in circumstances exceptionally favorable for establishing with all the countries of America, and even with the whole world, a commerce of the greatest importance.

Honduras is truly rich in useful and precious metals, in extensive and fertile farming lands, in lumber for building and cabinet work, and in textile and medicinal plants.

The government of Honduras, being convinced that the best means for developing the country would be to traverse it by an interoceanic railroad, attempted its construction as much as thirty years ago. Not being able to organize a company in this country, it at length contracted in England a debt of \$5,000,000 for the execution of a third part of the work, mortgaging the road itself and the government lands. In October, 1868, the work was formally commenced at Puerto Cortez; but scarcely had 50 miles of the road been laid, at a probable cost of a million and a half at the most, when Honduras, the victim of wretched management, found herself defrauded of the remaining millions, and indebted without the power of prosecuting the work. Since then other endeavors have been made to arrange the debt in England, and secure the continuance of the railroad, but these efforts have been of little avail, and at the present date Honduras possesses only her hopes for the future and 38 miles of railroad in actual operation, since the remaining 12 miles became useless, owing to the destruction of an iron bridge over the Chamelicon River, and to-day sleepers and rails lie buried beneath the grass.

The interoceanic railroad projected between the Bay of Honduras, on the Atlantic, and the Bay of Fonseca, on the Pacific, will be 200 miles

* Translation.

long, and have, at the center, a maximum elevation of 2,850 feet, or a grade of 29 feet to the mile, rather less than 1 in a 100. This favorable circumstance is due to a break at this point in the Cordillera of the Andes, and to the fact that a chain of rich and fertile valleys extends from north to south, thus materially facilitating the performance of the work, and insuring the success of the enterprise.

The road is to-day in the hands of Mr. Kraft, of Puerto Cortez, who leased it from the government for thirty years, five of which have already passed. This gentleman keeps the existing lines in operation, and obtains from the traffic between Puerto Cortez and San Pedro Sula a monthly return of about \$1,250. In case of the organization of a company to continue the road, Mr. Kraft will offer no objections.

The diagrams, profiles, and other details relating to the road will be found explained in the work of G. S. Squier, entitled "Notes on Central America," and may perhaps be found also in the archives of the State Department.

Another railroad from Puerto Cortez to Truxillo, 150 miles in length and parallel to the Atlantic coast, has been commenced on account of its obviously great importance to the development of the country. The principal objects of this road are the exploitation of valuable woods and the advancement of agricultural industry in the northern part of Honduras. For the construction of this road the government has made a liberal concession to Mr. S. B. McConnico, general agent in New Orleans, of the Illinois Central. It is to be hoped that the concessionary will avail himself of this grant, and construct the road within the time specified.

There is also a railroad projected, but not yet commenced, which is to unite the port of San Lorenzo, in Fonseca Bay, with Tegucigalpa, the capital and commercial and mining center of the Republic. This line will be over 100 miles in length, and, compared with those heretofore described, will be relatively costly. The annual imports and exports of Honduras are as follows :

IMPORTS.

	Packages.
For the the Pacific, Port of Amapala (7,389,707 pounds).....	59, 192
For the Atlantic :	
Port of Cortez	31, 899
Roatan y Ulila (7,347,745 pounds).....	16, 580
Trujillo.....	23, 168
Total.....	71, 647

EXPORTS.

For the Pacific.....	\$1, 805, 378. 33
For the Atlantic	1, 271, 114. 88
Total	3, 076, 493. 21

Of which \$1,500,000 are exported to the United States in silver and gold, and \$1,000,000 in fruits, lumber, India rubber, and sarsaparilla.

The maritime movement of the ports is as follows : In service on the Pacific, 11 steamers and 12 sailing vessels ; on the Atlantic, 34 steamers and 44 sailing vessels.

Which figures, relating to the past fiscal year, clearly show that during the construction of the railroads above mentioned, and especially of the interoceanic one, a large traffic between the ports and the interior of the country would be developed, proportionate to the immense natural wealth of the country, which is at present lying undeveloped.

Moreover, it should be taken into consideration that once interoceanic communication is established across Honduras it would serve for general transportation, competing successfully with Panama, especially with places north of the equator, such as San Francisco and New Orleans, or New York and San Francisco.

Appended will be found a map of Honduras, which, although imperfect in detail, is sufficiently correct as a whole. There is not yet a complete map of the country drawn with scientific precision ; but, having taken the limits of the coast from the United States hydrographic charts, and the border lines of the adjoining Republics, which have been well laid down, the details were filled in by means of observations made by experienced travelers.

With expressions of sincere esteem, I am, your obedient,
JERONIMO ZELAYA.

Hon. J. F. VELARDE,

Delegate from Bolivia, and Chairman Committee on Railroads.

THE RAILWAYS OF MEXICO.

The Mexican system of railroads since the completion of a line from Vera Cruz to the City of Mexico, with a branch to the city of Puebla, has been greatly developed. The country is now pretty well intersected by railways, and their construction is being rapidly pushed forward. In a short time Mexico will possess a net-work of railroads that must materially develop her vast natural wealth.

In 1879, there were only 372 miles of railway. From 1880 to 1884 the construction of new lines may be said to have been rather too rapid. In 1883 the number of miles existing was a little over 2,800.

In 1886 there were in operation about 3,725 miles of railroads.

In 1887 there were open for traffic 3,870 miles besides 92 miles of city or suburban lines, altogether 3,962 miles.

The Mexican minister, Señor Don Matias Romero, in a letter on the railroads of his country, dated April 30, 1890, says:

The only data which I can give you on the subject is the inclosed list, showing the number of kilometers of each line constructed. The President in his address to the Congress on the 1st instant, stated that Mexico has 8,850 kilometers of railroads.

All of the railway lines are subsidized, excepting the International Railroad.

List of railroads in Mexico.

Mexican Central Railroad (broad gauge):	Kilometers.
Mexico to Paso del Norte	1,970
Tampico to San Luis	442
Silao to Guanajuato	23
Soledad to San Luis	6
San Luis to Guaristamba	25
Aguas Calientes to San Luis	210
Irapuato to Guadalajara	260
Marques to Zimapan	24
	2,960
 Mexican National Railroad (narrow gauge):	
Mexico City to Laredo	1,351
Acambaro to Morelia	92
Morelia to Patzcuaro	62
Mexico City to El Salto	67
Manzanillo to Armeria	45
Zacatecas to Ojo Caliente	47
Matamoros to San Miguel	20
	1,684
International Railroad, from Torreon to Piedras Negras (broad gauge)	617
Mexican Railroad, Mexico City to Vera Cruz, and branches to Puebla and Jalapa, (broad gauge)	569
Intercolonial Railroad (narrow gauge)	623
Tehuantepec Railroad	108



03124



Hidalgo Railroad	157
Guaymas to Nogales.....	422
Sinaloa to Durango.....	62
Salamanca to Valle de Santiago.....	14
Cordova to Tuxtepec.....	37
Monterey al Golfo.....	256
Chihuahua to Parral.....	5
Potrero to Cedral.....	20
San Juan Bautista to Tamulta.....	3
Toluca to San Juan.....	12
Tlaxcala to Santa Ana.....	8
Tlalmanalco Railroad	20
Tehuacan to Esperanza Railroad.....	50
Vera Cruz to Alavarado.....	71
Puebla to Izucar.....	46
Calkini to Campeche.....	67
Merida to Sotuta.....	54
Merida to Calkini.....	52
Merida to Progreso.....	26
Merida to Valladolid.....	80
Merida to Peto.....	75
Maravatio to Iguala.....	45
Tramways	584
Cardenas to Rio Grijalva.....	8
Orizaba to Igenio.....	5
Chalchicomula Railroad	10
Total	8,850

WASHINGTON, April 30, 1890.

REPORT OF SEÑOR GENERAL ENRIQUE A. MEXIA ON THE RAILROADS OF MEXICO.

To the President of the Committee on Railroad Communication :

SIR: The Mexican railroad system consists, to-day, of 8,850 kilometers completed and 2,793 kilometers in course of construction. Two inter-oceanic lines will shortly be finished, the interoceanic from Vera Cruz to Acapulco, and the Tehuantepec from Coatzacoalcas in the Gulf of Mexico to the Pacific Ocean. The latter line will be completely finished before the end of three months. The lines that can serve for the Continental International Railroad are two: the Mexican International and Mexican Central. The former could be employed for traffic from all points between the Atlantic coast and the Rocky Mountains, and the latter for the traffic between the said mountains and the Pacific coast. These two lines unite in the Torreon, and come on only one line, the Mexican Central, to the city of Mexico.

From the capital of Mexico the route along the Vera Cruz Railroad would be taken to a point called Esperanza and from there to Tehuacan, which is the terminus of the constructed lines; and from thence the route would be taken that is in course of construction toward Oaxaca, Tehuantepec, and the Republic of Guatemala.

E. A. MEXIA.

WASHINGTON, April 15, 1890.



TO ACCOMPANY THE REPORT OF THE UNITED STATES DELEGATES

MEXICO

SHOWING RAILWAYS BUILT AND PROJECTED

SCALE IN STATUTE MILES.

EXPLANATIONS

- Lines of Rail Roads in operation
- - - Proposed Lines
- ... Intercontinental Lines



THE RAILROADS OF NICARAGUA.

MEMORANDUM CONCERNING THE RAILROADS IN NICARAGUA.

There are at present in operation in Nicaragua about one hundred miles of railroad.

The line is divided into two sections, which are called the Eastern and Western. They are separated by Lake Managua, the 24 miles of width of which are crossed by commodious steamers.

The Western section, which was the first constructed, starts from the port of Corinto, on the Pacific, and terminates at Lake Managua, as above stated. On this line, which is $57\frac{1}{2}$ miles in length, is a great bridge over the estuary or inlet of Paso-Caballos, which is a notable piece of engineering.

The Eastern section of the railroad goes from Managua, the capital of Nicaragua, to Grenada, a city situated on the great Lake Nicaragua. As this city is in direct and constant communication, by means of the the lake and the San Juan River, with the port of San Juan del Norte, or Greytown, on the Atlantic, it results that there exists across the territory of Nicaragua good and easy communication between the two oceans.

The Nicaragua railroad is on the American system, and was constructed exclusively with national capital, without aid from foreign funds. The road, as well as the rolling stock, is of the best quality. Although of small dimensions as yet, it is of the greatest utility to the country, for it brings in contact many of its principal commercial centers.

In Nicaragua there is noted a great interest in the development of railway enterprises, and it is certain that before long the number of miles in operation will have increased considerably.

As regards the connecting of the Nicaraguan railways with those which may be constructed in the neighboring republics, the work would present no difficult engineering feats as far as the topography of the country is concerned.

H. GUZMAN.

THE RAILWAYS OF PARAGUAY.

REPORT OF JOSÉ S. DECOUD, DELEGATE FROM PARAGUAY.*

WASHINGTON, January 23, 1890.

DISTINGUISHED COLLEAGUE: In reply to your esteemed favor of the 7th instant, I have the honor to forward to you the information requested with respect to the railroads of Paraguay, together with a map of the Central Railroad and its connection with the Argentine system.

In the report of the engineers, Burrell and Valpy, which I beg leave to append, you will find all the information I can procure which would be suitable to your needs.

With expressions of my most distinguished consideration, I remain,
JOSÉ S. DECOUD.

Hon. Dr. JUAN FRANCISCO VELARDE,
Chairman of the Committee on Railroads, etc.

Report of Messrs. Burrell and Valpy, M. M. Inst., C. E. of the Paraguay Central Railway, together with estimate of the probable traffic that will be carried when line is completed through out.†

This railway consists of three portions:

	Miles.
(1) From the port of Asuncion, the capital of Paraguay, to Paraguari, in operation	46
(2) From Paraguari to Villa Rica, in operation.....	46
(3) From Villa Rica to Villa Encarnacion, to be constructed.	136

Total length of railway, about 228

The first section, from Asuncion to Paraguari, was originally made by the Government, and has been in operation many years. Although this portion of the railway has been worked under great disadvantages, especially as regards the inadequate supply of rolling-stock, its revenue has rapidly and continuously increased, as the returns below will show, taking 3s. as the average value of \$1:

	Gross receipts.	Gross receipts per mile.
1883.....	\$10, 675	\$237
1884.....	13, 267	294
1885.....	13, 954	310
1886.....	19, 033	423
1887.....	24, 103	536

* Translation.

† Original.

The working expenses have been reduced from about 70 per cent. in 1884 (they are not obtainable for 1883) to about 60 per cent. in 1887; the net revenues have consequently more than doubled in this period.

It may confidently be expected that the results of the working of 1888, when known, will bear a favorable comparison with those of 1887, and as the new rolling-stock manufactured by Messrs. Krupp & Co. for the Government has recently been delivered in Asuncion, whilst in July, 1887, Congress voted the sum of \$150,000 for improvements on this section, there can be no doubt that the future returns of this portion of the railway will *per se* greatly exceed those obtained in the past.

The second section, from Paraguari to Villa Rica, is already constructed and equipped with the above-mentioned rolling-stock; opened for traffic since January, 1890.

The first and second sections together form a length of about 92 miles, and will connect Villa Rica, the second largest town in the country, and the center of a very rich district, with Asuncion. We anticipate therefore a very considerable and more than proportionately increased traffic to accrue to the railway immediately on the opening of the second section, with a reduction in the rate of working expenses.

From the surveys we have made of the extension from Villa Rica to Villa Encarnacion, we find that the line will be of easy construction owing to the comparatively level ground through which the railway will pass.

The earth-work will be light, except near Villa Encarnacion, where somewhat heavier work will be encountered, and a careful and more detailed study of the ground will be required than we have yet had an opportunity of making in order to select the best line.

The rivers to be crossed are not rapid and are of little depth, and all the bridge-work can be constructed with native timber, which is of a very suitable character.

The gradients will be comparatively light and the curves easy on this section, as well as from Asuncion to Villa Rica, so that the working expenses of the railway may fairly be expected to be low.

The railway, when completed, will run through and open up some of the most fertile and populous portions of the country. It will terminate at the town of Villa Encarnacion, on the river Parana, opposite to the town of Posadas, the terminus of the Argentine Northeastern Railway, now under construction and, we understand, being pushed forward rapidly.

These railways, when completed, will form the future trunk line of the country, affording as they will do the shortest route to the sea-coast, with important intermediate connections, firstly via Brazil to Rio Grande do Sul, secondly via Uruguay to Monte Video, and thirdly via the Argentine Confederation to Concordia, or if certain projected railways are constructed to Buenos Ayres itself.

The line from Villa Rica to Encarnacion, passing as it does through

a fertile country, will secure a considerable traffic, which will in addition largely increase the traffic on the line from Villa Rica to Asuncion. The through, or international, traffic may also be expected to be large and to arise immediately on the completion of the railway.

On a moderate basis we estimate that when the railway is opened throughout the gross traffic will amount, on the average, to £1,000 per mile per annum, or a total of £228,000, and judging by comparison of other South American railways, a traffic of this amount should be worked at 50 per cent., giving a net revenue of £114,000 per annum.

A considerable proportion of the country through which the railway passes consists of forest lands, comprising timber of valuable description for house building, ship building, railway sleepers, etc., and it is expected that a large traffic will be derived from the carriage of timber from the ports at both ends of the line. The carriage of yerba maté and agricultural produce—*e. g.*, tobacco, grain, oranges, etc.—should also yield a substantial income, whilst large numbers of horses and cattle are constantly being brought from the province of Corrientes to Encarnacion, which should further add to the receipts.

THE RAILWAYS OF PERU.

REPORT OF F. C. C. ZEGARRA, DELEGATE FROM PERU.*

LEGATION OF PERU
IN THE UNITED STATES OF AMERICA,
Washington, January, 1890.

SIR: I have the honor to present to you the report solicited by the committee of which you are the worthy chairman.

Appended to said report you will find a map of the Republic and a printed volume.

I have the honor to be, your very obedient servant,

F. C. C. ZEGARRA.

Hon. JUAN FRANCISCO VELARDE,

Chairman of the Committee on Railroad Communication.

DATA FURNISHED BY THE PERUVIAN DELEGATION TO THE COMMITTEE ON RAILROAD COMMUNICATION.*

No. 1.—*Map of the Republic.*

The Delegation has the honor to inclose a map which bears no title, but which, it believes, was copied from a work entitled: "Geographical Atlas of Peru," by Dr. Don Mariano Felipe Paz-Soldan, and although it is to be hoped that in its draughting other previous maps have been consulted, the Delegation does not consider itself authorized to guarantee its scientific exactness. For this reason it deems it indispensable that other works should be consulted, and especially one entitled "El Perú," written by the naturalist Don Antonio Raymondi, which contains abundant and important data relative to explorations, configuration of the land, physical conditions, and other details necessary to obtain an idea of Peru.

The delegation regrets not having at hand the said work, which might possibly be found in one of the many public libraries of Washington.

* Translation.

No. 2.—*Railroad lines constructed and in operation, lines in course of construction, and lines projected, and lines which connect the neighboring nations.*

The names of the lines, their length, and other details will be found in the accompanying collection of decrees and contracts. The lines actually in operation are the following :

	Kilometers.
Callao to Chila :	146
Callao to Lima and Chorrillos.....	27
Lima to Ancon.....	
Lima to Magdalena	6
Pisco to Yca	74
Chimbote to Huaraz	70
Payta to Piura and Catacaos	
Salaverry to Trujillo.....	7
Pacasmayo to Yonan and Guadalupe	146
Mollendo to Arequipa	173
Arequipa to Puno	370
Juliaca to Santa Rosa.....	193
Mineral del Cerro de Pasco.....	11

The projected lines consist principally of the prolongation towards the interior of the country of some of the existing lines already mentioned. No line exists connecting Peru with the neighboring nations, but an effort has been made to prolong the Puno line to Desaguadero in order to unite it with the railroad system projected in Bolivia.

No. 3.—*Cost of work done and projected.*

The cost of the work done will be found, for the most part, in the accompanying volume. No estimate has been made of the projected work, because the Government is not responsible for its payment, but the syndicate of foreign stockholders under the clause of the last contract concluded in Lima, and it has not been considered necessary to specify in detail the value of work not yet commenced.

No. 4.—*Annual returns, traffic, and prospects.*

The returns from the lines actually in operation have only been satisfactory in the case of those completed, such as Lima to Callao and Chorrillos, Lima to Chila, and Mollendo to Puno. The others, in order to give any advantageous results, without doubt need to be extended to their natural termini. This attained the interior development of the country will make a great and rapid advance ; the fountains of wealth existing in the Republic will be opened and what to-day remains inert for lack of cheap and regular outlet to the sea-coast will be developed. With this in view it is of the greatest interest for Peru to have railroad lines running either to the Atlantic or to the Pacific Ocean and it is evident that enterprises of this kind will be of incalculable utility.

No. 5.—*Facilities which the Government has offered for this class of work.*

It may be judged to what extent the Government of Peru is, on its part, inclined to facilitate the construction of railroad lines through its territory when the offers it has already made are borne in mind.

Not long since it invited proposals for the construction of a railroad from Lima to Pisco, offering the following perquisites :

(1) Exemption of customs duties, during twenty years, on the material, fixed and rolling stock destined for the plant of the line ;

(2) Authority of the Government to adjudicate to the manager 25,000 hectares of vacant lands near the line, with the express condition that they shall be irrigated within five years ;

(3) Exemption from military service in the army, during time of peace, for the employés and laborers on the railroad ;

(4) Privilege of operating the road for twenty-five years ; and

(5) The power to transfer the property of the line and its branches.

In the contracts concluded lately with the foreign bondholders, whilst the power to operate the railroads constructed is given them, there is imposed upon them the obligation to extend these, and there is ceded to them :

(1) All the disposable government lands necessary for the railroad lines, stations, depots, factories, and other dependencies without remuneration whatever.

(2) Exemption from government taxes during the period fixed for the construction and possession of the railroads ; and during the period of the enjoyment of the benefits derived therefrom, exemption from taxes on locomotives, rolling stock, rails, sleepers, and anthracite coal.

(3) The right to navigate freely the interior lakes under the Peruvian flag.

THE RAILWAYS OF SALVADOR.

REPORT OF JACINTO CASTELLANOS.*

WASHINGTON, D. C., January 9, 1890.

MY DEAR SIR AND DISTINGUISHED COLLEAGUE:

Replying to your favor of the 7th instant, which I had not received until to-day, I am sorry to inform you that I lack the documents necessary to give you information with respect to the plans and computations which may have been presented in Salvador for newly projected railroads; and that the only data that is possible for me to give you touching their actual state and the possibility of connecting them with the lines of the neighboring Republics of Guatemala and Honduras is as follows:

A tramway $10\frac{1}{2}$ miles in length unites the cities of San Salvador and Santa Tecla.

A steam railway connects the port of Acajutla with the city of Sonsonate, the distance being $21\frac{1}{2}$ miles.

From that city the same line is extended to the interior of the Republic to a point called Amate Marin, over a distance of $80\frac{3}{4}$ miles.

Work is now progressing on the railroad from Amate Marin to the capital of the Republic, and once concluded, it will have an approximate extent of 25 miles.

There are two other lines of railways now projected, one to connect the rich city of Santa Ana with the port of Acajutla, joining it at the station of Armenia, between Sonsonate and San Salvador, and the other from the port of La Union to the city of San Miguel. For the building of the latter, a company is now being organized in London, and for the former there have been subscribed by the capitalists of the country about \$300,000.

I do not consider the union of the Salvador railroads with those of Guatemala and Honduras to be difficult, if these two republics carry their roads to the frontier; for at any point thereon they could be joined to the existing roads.

It is in the latter lines, to my mind, that the principal difficulties exist, because of the great extent of their territories.

I am, sir, with every consideration, your very humble servant,
JACINTO CASTELLANOS.

Mr JUAN F. VELARDE,

Delegate for Bolivia to the International American Conference.

* Translation.

THE RAILWAYS OF THE UNITED STATES.

*REPORT OF HENRY G. DAVIS AND ANDREW CARNEGIE, DELEGATES
FROM THE UNITED STATES, TO THE COMMITTEE ON RAILWAY COM-
MUNICATION OF THE INTERNATIONAL AMERICAN CONFERENCE.**

WASHINGTON, D. C.,

March 24, 1890.

The attention of the people of the United States has been for years directed to the desirability of securing closer commercial relations with the states of Central and South America.

For want of regular, quick, and economical transportation between these countries, trade is carried on almost wholly by way of Europe; mail matter, passengers, and goods are compelled to cross the Atlantic twice before reaching their destination. Although united geographically, close commercial relations do not exist; neighbors though we are, yet for want of prompt and regular transportation facilities we are widely separated.

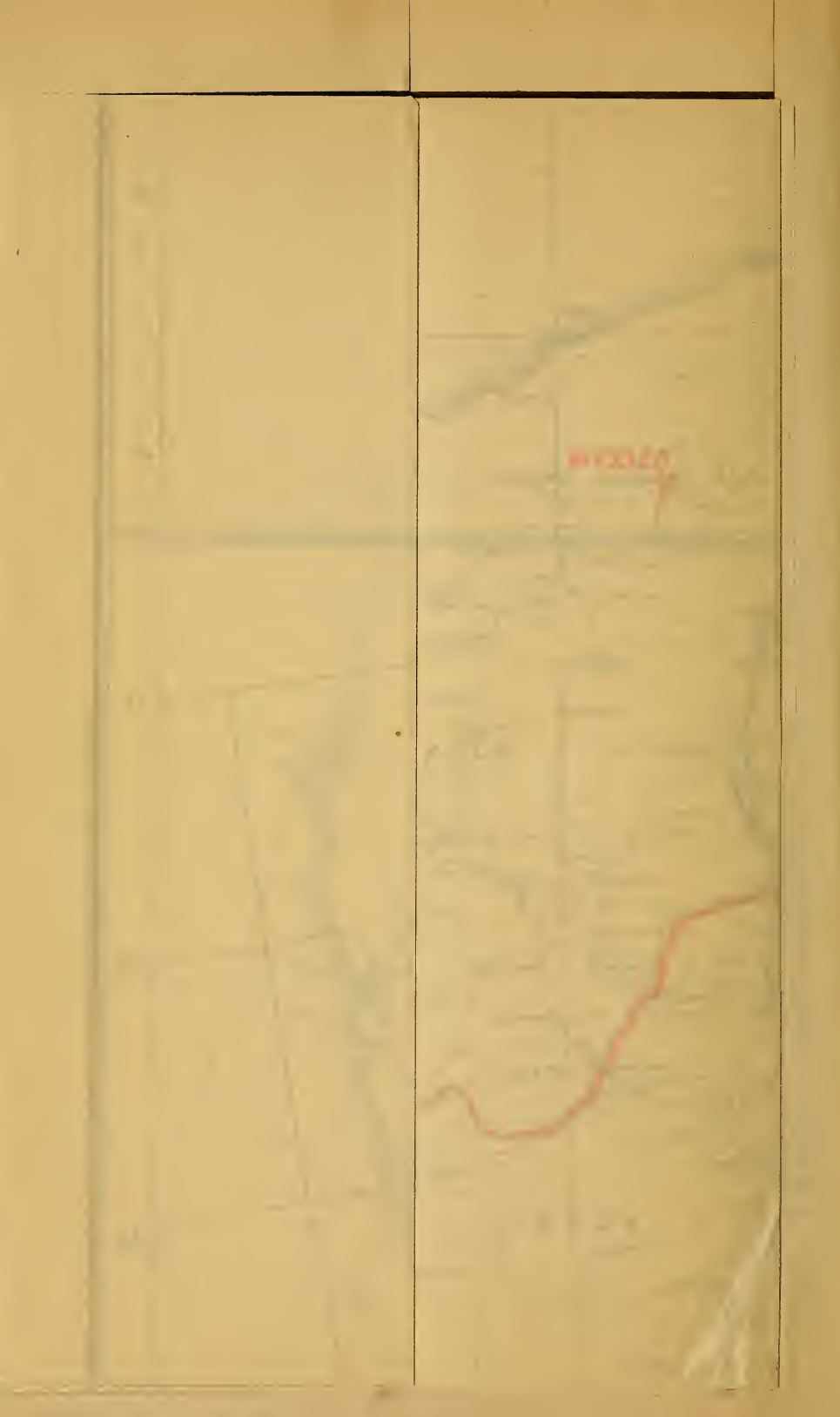
That the trade with these countries is extensive is shown by the table on page 74. Spanish America has an area of 8,500,000 square miles, with about 50,000,000 inhabitants; of this area a large part is undeveloped, although immensely rich in mineral and agricultural resources, and yet the present trade amounts to about \$900,000,000 yearly, about equally divided between imports and exports; of this trade in 1889, \$173,217,571, or one-fifth only, was with the United States, \$122,014,137 being imports and \$51,203,434 exports. In other words, we buy from the Spanish American countries more than twice as much as we sell them. This should not, and need not, be.

In 1887 Great Britain's trade with these countries amounted to about \$176,208,000, of which \$71,283,000 were imports and \$104,925,000 exports, or, in other words, Great Britain sells almost twice as much as it buys from them.

The United States exported to Great Britain in 1889, \$382,981,674, and imported from that country \$178,269,067, less than one-half the exports. Why should our trade with Great Britain be so much in our favor, and that with Spanish-American countries the reverse, and Great Britain's trade with these countries be so much more favorable to it than our trade with them is to us?

We manufacture most of the articles used by them as cheaply as Great Britain, and many of these manufactured in the United States are shipped





to Europe and then to Spanish America. Central and South America have raw material which we need, and it may be said that the resources of these countries are almost undeveloped. There is a great field which if opened up to us must be immensely valuable.

With quick and regular communication which Europe has enjoyed and we have not, she has more than successfully competed with us for the trade of these countries; but if rail communication were opened from the United States southward such would not be the case, as we should then have the advantage of connection by land which Europe could not obtain. This is proved by an examination of the effect of rail communication between the United States, Canada, and Mexico.

The opening of direct rail communication between the United States and the city of Mexico took place in April, 1884. From that day it began to be felt that all influences and all other modes of communication combined could not exert so powerful an effect in drawing these countries together and extending their trade. Special attention is called to the growth of traffic between the two republics since united by rail.

From tables, pages 77, it is seen that whereas the traffic carried in cars or other land vehicles amounted to \$2,164,414 in the year 1883, it reached \$13,955,764 in 1889, increasing sixfold in six years. Nor has this remarkable increase been made by diverting trade from other land routes or from water transportation lines, for the total imports and exports between the United States and Mexico (table 29, page 76) shows rapid and continuous development, the total of 1883 being \$24,764,000, and that of 1889, \$32,740,000.

The influence of rail communication upon trade between the United States and British North American possessions is not less marked.

In 1853 a railway was opened between Portland, Me. and Montreal. The year previous, 1852, shows imports into the United States from British North America, \$5,469,000. These reached \$43,000,000 in 1889. The exports from the United States in 1852 were only \$13,993,000. In 1889 they reached \$57,412,000. It is to the railroads we owe the revolution which has taken place in the trade of these British possessions.

In 1887 Canada exported to Great Britain \$44,571,846 and imported \$45,167,040, and in the same year exported to the United States \$37,660,190 and imported \$51,006,323, the total to and from Great Britain being \$89,738,886, and the United States \$88,666,513.

In 1889 this was reversed. The United States now ranks first; the proportion of Great Britain's trade to and from being 44.44 per cent. of the whole, that of the United States 47.20, so decided is the effect of frequent and rapid intercommunication by rail over the slower and irregular mode by water. It is a significant fact that almost all the trade between these countries is transported by rail. Not one regular line of steam-ships plies between the United States and Canadian ports. These exhibits prove that the experience of the United States with railways within her own border is being repeated with lines in Canada and



Mexico, and, no doubt, would be repeated upon international lines as these are constructed, and bind together the republics of America in their peaceful grasp.

THE UNITED STATES RAILWAY SYSTEM.

As far as the people of the United States are concerned, it unnecessary for us to dwell upon the importance of our railway system, for no words of ours can adequately describe their universal appreciation of the value of rapid railroad communication between all parts of the Republic. Not only are railways considered by them the first factor in our material development, but it is clearly seen that these alone have rendered development possible; nor is this their most valuable service to the nation; for, unbound by these ribs of steel, the question of the future of the union between the States might give rise to serious foreboding, bound together as they are into one vast neighborhood the people of the various States, by frequent change of residence, intermarriage, commercial relations, and constant communication, are fast becoming more and more of one national type, alike in thought, manner, and action.

It may be well, however, for the benefit of those among our neighboring republics who have not yet fully entered upon the construction of railways to give a short history of our railway policy and its results. For this purpose we have availed ourselves freely of the services of Messrs. Taylor and Brock, the respective heads of the Railway Bureau and of the Bureau of Statistics.

The United States possesses to-day nearly half the railway mileage of the world. At the close of the year 1889 there were 161,313 miles in operation, enough to make twelve steel girdles around the earth. Their cost has been fully *eight thousand millions of dollars*. Excepting agriculture, the railway interest is the largest single interest in the country. It employs as wage-earners not less than two millions of people; thus eight millions or more persons depend upon railways for their daily support. The development and prosperity of the country have been proportionate to the building of its railways. In the increase of population, business, and wealth, in the opening to settlement and commerce of new States and Territories, the railway has been the most potent factor. It touches every pursuit, whether of agriculture, manufactures, finance, commerce, or science. It is comparatively a short time since the settlement of the country bordering on the Mississippi River began. Prior to that, and before the era of railway building, settlements were few and small upon the shores of the lakes and the navigable rivers that then furnished means of transportation for the surplus products of the factory and farm.

As fast as railways were constructed the adjacent country was rapidly settled. Wherever a railway reached, supplying the necessary facilities of transportation, there hurried with eager steps labor and capital, seeking employment and investment. Forests were felled and

mines opened and contributed their wealth to the markets of the world. Vast prairies, inhabited only by Indians and wild beasts, where the yearly vegetation rotted upon the deepening soil, when traversed by railways quickly sprang into active agricultural and commercial life. The touch of the plowshare brought abundant harvests, and villages and cities sprang into existence.

To show the great importance of railways to the agricultural interests of the United States, Poor's Manual for 1889 says :

Over ordinary earth roads wheat will bear transportation for a distance of only 250 miles, when its value is \$1.50 per bushel at the market. Indian corn will bear transportation only 125 miles, when its value is 75 cents per bushel. When grown at greater distances from market, these products, without railroads, have no commercial or exportable value. The railroads by transporting at one-twentieth the cost over earth roads give a marketable value to wheat grown 5,000 miles inland; to Indian corn grown 2,500 miles inland. Beyond a certain limit, consequently, these works are the sole inducement to the production of these staples in an amount greater than that necessary for consumption by the producer. Railroads are as much the condition of their production as the ship is for the production of wool in Australia. The effect of cheap production is well illustrated in the extraordinary increase in the production of wheat and corn in the Western States and the corresponding impulse given to the construction of railroads, the increased mileage of which has only kept pace with that of other industries.

It is not, however, as potent agencies, foremost in stimulating the settlement and development of the resources of the country, that railways perform their highest function, but, as has been before stated, they cement and tend to preserve the unity of the extended region over which the Republic holds sway. The building of the first Pacific railway was equally a military and a commercial necessity. Previous to the opening of rail communication, the Pacific coast had little in common with the Union. No sooner had the iron bands joined the agricultural regions of the Mississippi Valley and the manufacturing States of the East with it, than close business, social, and political relations sprang up between the two sections and bound them closely together. The intimate social, political, and commercial relations which now so happily exist between all parts of our united country could never have been created without rail communication.

The progress made in railway building in this country has been due largely to the liberality shown by local communities, the several States and the General Government toward railway enterprise. The Government has been prodigal in the bestowal of munificent grants of the public domain to aid the construction of railways, and in this regard has been wisely emulated by many of the States, which have given large tracts of their public lands to encourage the building of railways within their limits. In addition to large and numerous subsidies given by the General Government and the States to railway companies many counties, towns, villages, and cities have voted sums in aid of railway construction. Communities that had no railway have eagerly pledged their credit to secure one, and those that have had one or more have often made liberal donations to secure competing lines.

There is no room to doubt that this policy was wise. The value of every acre of land and every dollar in money contributed toward the construction of railways has been repaid tenfold to the public in the added stimulus to business and increased value to property produced by cheaper transportation. Especially has this been true as regards the States and Territories of the West. There lay a region embracing more than half the area of the United States rich in natural resources, yet inaccessible, and heretofore practically valueless. Railways alone could have made this latent wealth productive. So with our mineral wealth. Had not railways stimulated by public aid been constructed through the mineral regions of the country our mines must have remained unopened.

Railway construction once begun in a country can stop only when all sections are supplied, for such are the advantages of railways to the sections that construct them that all other sections must necessarily follow or become almost valueless. For this reason we find every part of our country either already supplied with railways or rapidly becoming so.

Railway management is constantly growing more broad, conservative, and liberal; excessive rates and unwarranted discrimination are being corrected by competition and forbidden by law. Rates by rail are now not infrequently as low as by water, a condition of things which, a few years ago, was not thought possible. Reference to the following tables will show the great reductions in rates by rail which have taken place in recent years. It is believed that the minimum charges have not yet been reached.

FREIGHT RATES.

Annual average freight rates per bushel of wheat for transportation from Chicago to New York for each year from 1857 to 1888, inclusive.

Calendar year.	Average rates per bushel.		By all rail.	Calendar year.	Average rates per bushel.		By all rail.
	By lake and canal.*	By lake and rail.			By lake and canal.*	By lake and rail.	
	Cents.	Cents.	Cents.		Cents.	Cents.	Cents.
1857.....	25.29			1874.....	14.10	16.9	28.7
1858.....	16.28			1875.....	11.43	14.6	24.1
1859.....	17.59			1876.....	9.58	11.8	16.5
1860.....	24.83			1877.....	11.24	15.8	20.3
1861.....	26.55			1878.....	9.15	11.4	17.7
1862.....	26.33			1879.....	11.60	13.3	17.3
1863.....	22.91			1880.....	12.27	15.7	19.9
1864.....	28.36			1881.....	8.19	10.4	14.4
1865.....	26.62			1882.....	7.89	10.9	14.6
1866.....	29.61			1883.....	8.37	11.5	16.5
1867.....	22.36			1884.....	6.31	9.95	13.125
1868.....	22.79	22.0	42.6	1885.....	5.87	9.02	14.00
1869.....	25.12	25.0	35.1	1886.....	8.71	12.00	16.50
1870.....	17.10	22.0	33.3	1887.....	8.51	12.00	16.33
1871.....	20.24	25.0	31.0	1888.....	5.93	11.00	14.50
1872.....	24.47	28.0	33.5	1889.....	6.89	18.70	15.00
1873.....	19.19	26.9	33.2				

* Including canal tolls until 1882, but not Buffalo transfer charges.

† Averages of officially published tariffs. The actual cost of transportation was somewhat less, as rates were unsettled during a considerable portion of each year, and grain was frequently taken at less than tariff rates.

‡ Average of officially published tariffs.

Annual average freight rates on grain and flour from St. Louis to various points during each year from 1876 to 1888, inclusive.

[Prepared by Mr. George H. Morgan, secretary Merchants' Exchange, St. Louis, Mo.]

Calendar year.	To New Orleans by river.		To New York by rail.		To Liverpool.	
	Grain in sacks, per 100 pounds.	Wheat in bulk by barges, per bushel.	Grain per 100 pounds.	Flour per barrel.	Via New Orleans, wheat per bushel.	Via New York, wheat per bushel.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
1876.....			39½	79		
1877.....	21	8½	41	82		
1878.....	17½	7½	38	76		
1879.....	19	7½	32½	67		
1880.....	19	8½	42	84		
1881.....	20	6	32	64		
1882.....	20	6½	29½	59	22½	23½
1883.....	17½	5½	33	66	19½	27
1884.....	14	6½	26	52	14½	21½
1885.....	15	6½	22½	44½	15½	20½
1886.....	16	6½	29	58	16½	24
1887.....	18	6½	32½	64½	14½	24½
1888.....	15	6½	*29½	59	15½	22½
1889.....	17½	5½	†28½	58	17½	24½

* These figures 29½ represent published rates. At times during the year the rate was cut to 20 cents, making the average rate on that basis, St. Louis to Liverpool via New York, as low as 17½ cents per bushel.

† On all grain, except corn, on which the rate was 26 cents.

NOTE 1.—In the normal condition of freight rates, the rate to Boston would be 5 cents per 100 pounds higher than to New York, to Philadelphia 2 cents per 100 pounds lower than to New York, and to Baltimore 3 cents per 100 pounds lower than to New York; but sometimes rates by these cities are independent of local rail rates.

NOTE 2.—The rate on flour is always double the rate on grain per 100 pounds.

GRANTS TO RAILWAYS.

On March 2, 1827, Congress granted to the State of Illinois lands to aid in the construction of a canal "to connect the waters of Illinois and Lake Michigan." Six years later, in 1833, Congress authorized the above grant to be diverted, and a railway constructed with the proceeds of said lands. This was the first land grant ever made by the Government to aid in the construction of a railway.

The first important land-grant act passed was that of September 20, 1850: "An act granting the right of way and making a grant of land to the States of Illinois, Mississippi and Alabama, in aid of the construction of a railroad from Chicago to Mobile." This grant gave alternate sections of land (even numbered) for six sections in width on either side of the road and branches, making six sections, or 3,840 acres for every mile of road. In the case of this grant, as in the case of all those made subsequently, the law provided that the land within the limits of the grant not given to the railroad company, that is, every other section, should be doubled in price from \$1.25 to \$2.50 per acre. In this way, the Government received as much from the lands remaining within the limits of the grant, as it would have received from all the

lands had no grant been made. The building of railroads rendered the lands salable; whereas in most cases, if no railroads had been constructed, the lands would never have found purchasers, as they were of no value where facilities for the transportation of their product to market were not provided.

Under an act passed June 10, 1852, entitled "An act granting the right of way to the State of Missouri, and a portion of the public lands to aid in the construction of certain railroads in that State," the Hannibal and St. Joseph and the Missouri Pacific Railroads were built.

June 29, 1854, a grant was made to the Territory of Minnesota for the purpose of aiding the construction of a railroad from the southern line to the eastern line. In 1856 a series of grants was made to Iowa and other States, to be used only to aid in the construction of railroads, which were in form and substance similar to the Missouri grant of June 10, 1852.

From 1850 to 1860 a strong sentiment arose favorable to the construction of a railroad to the Pacific coast. Congress, on July 1, 1862, enacted a law entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes." This was the charter of the Union Pacific Railroad Company, which conferred certain privileges and made grants to several other railroad companies then existing under State charters. It empowered the Union Pacific Railroad Company "to lay out, locate, construct, furnish, maintain, and enjoy a continuous railroad and telegraph, with the appurtenances, from a point on the one hundredth meridian of longitude west from Greenwich * * * to the western boundary of Nevada Territory," subject to the terms of the act.

At the western boundary of Nevada it was to meet and connect with the line of the Central Pacific Railroad of California, a corporation then existing under the laws of that State which, by this act, was authorized to construct a railroad and telegraph line from the Pacific coast at or near San Francisco or the navigable waters of the Sacramento River to the eastern boundary of the State of California, upon the same terms and conditions in all respects as were provided for the Union Pacific Railroad Company, and it was further provided that the Central Pacific Railroad Company of California, after completing its line to the eastern boundary of California, should continue constructing eastward until it should meet and connect with the Union Pacific, and the whole line of railroad from the Missouri River to the Pacific Ocean was completed.

Right of way was granted through the public lands to the extent of 200 feet in width on each side of the track, and a grant of land amounting to five (increased to ten by the act of 1864) alternate sections per mile on each side of the road. In addition to the lands granted to aid in the construction of the Pacific roads mentioned, the act also provided for a Government subsidy of bonds equal to \$16,000 per mile for that por-

tion of the line between the Missouri River and the base of the Rocky Mountains; \$48,000 per mile for a distance of 150 miles through the mountain range; \$32,000 per mile for the distance intermediate between the Rocky and Sierra Nevada ranges, and \$48,000 per mile for a distance of 150 miles through the latter range of mountains.

These bonds were in the nature of a loan of credit by the United States, and were at first made a first-mortgage lien on the whole line of railroad and telegraph and all its appurtenances, but by section 10 of the act of 1864 they were made a second mortgage or subordinate lien to bonds of the same tenor and amount which the respective companies were authorized to issue.

The United States issued bonds to the amount of \$27,236,512, and gave 13,384,089 acres of land to the Union Pacific Railroad Company. It also issued bonds to the amount of \$6,300,000, and gave lands amounting to 8,174,000 acres to the Kansas Pacific Railway Company. The Denver Pacific Railway and Telegraph Company also received 1,355,292 acres of land. On January 20, 1880, these roads were consolidated and formed the Union Pacific Railway Company. It will be seen, therefore, that the Union Pacific Railway Company has been loaned by the Government, in bonds, \$33,536,512, and been given in lands, 22,913,381 acres. The Central Pacific Railroad Company of California received in bonds \$5,885,120, and was granted 9,440,000 acres of land. The Western Pacific Railroad Company received bonds to the amount of \$1,970,560 and its land grant amounted to 1,576,448 acres. June 23, 1870, the Central Pacific Railroad Company of California and the Western Pacific Railroad Company were consolidated under the name of the Central Pacific Railroad Company; this company has, therefore, been loaned in bonds, \$27,885,680, and has been granted lands to the extent of 11,016,448 acres.

Previous to these grants the Government expended \$440,000 in making preliminary surveys to determine the feasibility of building a line to the Pacific.

In addition to the Government aid rendered to the railroads mentioned, large grants of land have been bestowed upon other companies for the building of transcontinental and other railroads.

The lands given by Congress to aid railway construction aggregated 197,700,000 acres. Some of these grants have been forfeited and others reduced in various ways, but most of the lands have gone into the possession of the various companies. It is safe to say that these lands, after the building of the railways to which they were given had been completed, were worth, at a low estimate, from \$3 to \$5 per acre. In many cases where grants of timber lands were made, including tracts of pine, the value of the lands was greatly in excess of the figures given. Taking these figures as a safe basis, they show that Congress has donated for railroad purposes lands worth from \$500,000,000 to \$800,000,000.

Vast as is this sum, the statistics of the increase in the population, business, and wealth of the States and Territories in which these land-grant roads have been built prove that its bestowal was wise.

The policy pursued by the people toward railway development has always been of the most generous and helpful character. It is specially gratifying that vast as have been the grants and concessions by the National Government, States, and communities, yet the returns made by the railways to the national unity, growth, and well-being, have far exceeded the expectations of the most sanguine, and that the Government will not be called upon to lose one dollar of any of its pecuniary advances or upon any of its guaranties, all the assisted lines being amply able to meet such obligations from their own revenues.

RAILWAY CONSTRUCTION.

Sixty years ago there were but 23 miles of railroad in the United States. In the next thirty years about 30,000 miles were built. In the last thirty years over 130,000 miles have been built. The figures which we give below as to the railroad-building, as well as to the growth of the States named in population, products, and wealth, date from 1860, a period of thirty years. The first few years following 1860, it must be remembered, were the years of the civil war, when progress in railway-building, as well as in many other public and private enterprises, was greatly retarded or entirely suspended.

Railway mileage of the United States.

Year.	Built during the year.	Total operated at end of year.	Year.	Built during the year.	Total operated at end of year.
	<i>Miles.</i>	<i>Miles.</i>		<i>Miles.</i>	<i>Miles.</i>
1860	1,846	30,635	1885	2,930	128,309
1865	1,177	35,085	1886	8,100	136,419
1870	6,070	52,914	1887	12,872	149,281
1875	1,711	74,096	1888	7,001	156,082
1880	6,712	93,296	1889	5,231	161,313

To prove that the aid rendered railways was wisely bestowed, it is only necessary to consider the increase in population and wealth directly attributable to their construction. It must be borne in mind that most of the railways receiving public assistance could not have been constructed at all, or that their construction would at least have been long delayed, unless thus fostered. Many of these roads were constructed before the business of the sections they traverse appeared to require them.

The policy was to build through sparsely populated or altogether unsettled regions in the belief that railways would induce settlement and create business. This has proved to be the case. Settlements have rapidly followed the building of every railway. No matter how wild and unproductive the country through which it passed, sooner or later it developed remunerative traffic for itself.

The figures emphasize the facts more strongly than anything that can be said relating to the wonderful growth which has followed railway facilities. We have selected a few of the States and given figures showing the number of miles of railway built, and their increase in population, products, manufactures, and wealth since 1860. (See page 78.)

The reader will search the history of the world in vain for such a record of growth as these figures show, and which the railway system alone has rendered possible.

SUMMARY.

The following summary shows the mileage of road, equipment, stock, bonds, and other liabilities; also earnings and traffic statistics of all the railways in the United States for the year 1888:

	Miles.
Mileage of railways, 1888.....	156,082
Double track, sidings, etc	37,225
Total track.....	193,307
Locomotives.....	29,398
Cars:	
Passenger.....	21,425
Baggage, mail, etc.....	6,827
Freight.....	1,005,116
Capital stock	\$4,438,411,342
Bonded debt.....	\$4,624,035,023
Other liabilities.....	\$544,040,944
Passengers carried.....	451,353,655
Tons of freight moved.....	589,398,317
Earnings:	
Passenger.....	\$251,356,167
Freight.....	639,200,723
Miscellaneous.....	60,065,118
Total earnings.....	950,622,008

RAIL COMMUNICATION BETWEEN THE THREE AMERICAS.

Examination of the subject of continuous rail communication between South and Central America, Mexico, and the United States is most encouraging. Judged by what has already been accomplished, the task can not be deemed stupendous. In opening railways between the Atlantic and Pacific Oceans, the United States, Canada, and other countries have performed works of equal or greater magnitude than will probably be required to establish unbroken railway communication with all the Republics south of us.

The building of the Baltimore and Ohio and the Pennsylvania Railways over the Allegheny Mountains were greater undertakings than that of an intercontinental railway would be now.

The most difficult portions of a railway to South America will not exceed those of the Mexican Railway from Vera Cruz to the City of Mexico, or those of the Panama Railway across the Isthmus.

Much has already been accomplished in the different Spanish-American countries in building parts of the proposed through line, which, when combined, will reduce the entire work and distance almost one-half; so that not only can continuous railway communication with those countries be considered feasible, but also that it is on a fair way to be realized. The situation at present stands thus:

The railways of the United States, from all points east and west, connect with the railways of Mexico upon the border of the two countries at El Paso, 2,456 miles from New York, 1,286 miles from San Francisco, and 1,642 miles from Chicago; at Eagle Pass, 2,083 miles from New York, 1,819 from San Francisco, and 1,380 miles from Chicago; and at Laredo, 2,187 miles from New York and 1,316 miles from Chicago. Hence to the City of Mexico there are two rail routes: that from El Paso via the Mexican Central, 1,224 miles; that from Laredo via the Mexican National, 839 miles, making the distance from New York via El Paso 3,680 miles, from San Francisco 2,510 miles, and from New York via Laredo 3,026 miles. A line is in operation 183 miles south of the City of Mexico, and a concession has been granted for its extension 585 miles to the borders of Guatemala. Surveys are being made along the route, and it is believed that the construction will be completed at no distant day. We are informed that a survey is also being made for the connection of the Mexican line with the city of Guatemala, which will carry the line 120 miles further south, and leave only 60 miles to reach the northern border of Salvador. In Salvador a line has been projected through that state about 170 miles. To carry the line through Honduras in order to reach the nearest point of the Nicaraguan railway system is only about 90 miles, and this system, consisting of two sections of 58 miles and 32 miles in length, can be incorporated into the through line by uniting these two sections by a new line of about 35 miles. Through Honduras, Nicaragua, and Costa Rica the country is reported of a character very favorable to railway construction.

From the southern terminus of the Nicaraguan system to the boundary of Costa Rica and through Costa Rica to its railway, of which about 35 miles may be used in the through line, is about 210 miles. We are informed that a syndicate has acquired a concession and will build a line to connect with the railway already constructed. About 75 miles of this may be utilized, thus lessening by so much the distance to be constructed by the through line.

From the southern terminus of the Costa Rica Railway, the Atlantic coast may be followed to the northern border of South America, a distance of about 130 miles.

Thus to carry communication through Central America from the city of Mexico requires about 1,700 miles of railway, of which 295 miles are already constructed and in operation, about 780 miles are being constructed and surveyed, leaving 625 miles still to be located.

In the extreme south the railways of the Argentine Republic connect

with those of Chili, Uruguay, and Brazil, and extend northward to within 120 miles of the Bolivian frontier and are rapidly being pushed further. Concessions have been granted for the continuation of these lines, or rather for the building of a line to connect with them, and with the railways of Bolivia and Peru, which when completed will afford communication as far north as Cuzco in Peru, about 2,190 miles from Buenos Ayres.

Beyond this, northward to the boundary of Central America, little has been done toward an intercontinental line. Should it be located along the Central Plateau in the heart of the Andes, then a line which has been projected north and south 151 miles in Ecuador might be used, in addition to about 30 miles to be built in Peru near Cerro de Pasco. A French syndicate is also endeavoring to secure a concession in Colombia to build a line from Bogotá to Cartagena, and are said to have the capital to construct it; but it may be said that nothing has really been done, and especially so if the intercontinental line should be located on the eastern slopes of the Andes, through that rich but almost unknown country of the headwaters of the Amazon. From Cuzco in Peru to the railways of Costa Rica, about 2,300 miles, is found the one long link which the intercontinental line will be called upon to construct.

From the southern terminus of the railroads now in operation in Mexico to the northern terminus of the Argentine system is estimated at 4,900 miles. In this distance 230 miles are now in operation which may be utilized in the through line; of the remaining distance, about 1,800 miles are already under survey and construction, which when completed will leave about 2,890 miles to be located and constructed, in order to complete the line that will eventually unite the republics of the Western Hemisphere.

The distance between New York and San Francisco by the shortest rail route is 3,207 miles.

From every point of view, it seems clear to us that immediate steps should be taken to ascertain whether the acquisition of advantages of such transcendent importance as direct and unbroken rail transportation would give to all the republics of this continent, are really within our reach by any reasonable expenditure, or by the granting of reasonable concessions to capitalists who would undertake the construction and operation of the necessary railway, and give satisfactory security for the fulfillment of their engagement.

We strongly recommend to the International Conference that provision should be made for the appointment of an International Commission of Engineers, to make the necessary surveys and report upon the entire subject at the earliest possible date. We are of opinion that our Government will co-operate with the other republics in this matter, for its policy in the past has shown it to be most liberal in aiding, by grants of land and of money, all enterprises for the improvement of means of communication, nor has this policy been confined to enter-

prises entirely in our own territory, for the problem of interoceanic communication across the Isthmus of Panama, and through Central America, has received attention and obtained aid as early as 1834.

When the recommendations of this proposed commission are submitted to the various governments, they can then confer as to the best means of securing the union of the three Americas by unbroken and direct rail communications.

We must believe that a work which would confer such manifold advantages to all the countries interested, would so strongly commend itself as to induce them promptly to give it such encouragement and to take such measures as will lead to its early completion.

Area, population, exports, imports, and miles of railway in the Spanish-American countries and the United States.

Countries.	Area (sq. miles).	Population.		Exports.		
		Year.	Number.	Year.	Total.	To the United States in 1889.
Argentine Republic	1, 125, 086	1887	3, 894, 955	1887	\$113, 244, 801	\$5, 454, 618
Bolivia	772, 548	1882	1, 182, 279	1885	9, 745, 000	2, 136
Brazil	3, 119, 764	1888	14, 002, 335	1887	143, 903, 651	60, 403, 804
Chili	293, 970	1885	2, 527, 320	1887	57, 194, 709	2, 622, 625
Colombia	504, 773	1881	3, 878, 600	1887	10, 037, 295	4, 263, 519
Costa Rica	23, 000	1883	203, 780	1887	4, 667, 422	1, 442, 365
Ecuador	248, 370	1885	1, 004, 651	1887	7, 356, 868	695, 005
Guatemala	41, 830	1888	1, 427, 116	1887	7, 044, 498	2, 346, 685
Honduras	47, 090	1887	351, 700	1887	1, 296, 000	1, 215, 561
Mexico	751, 479	1882	10, 447, 984	1888	38, 619, 867	21, 253, 601
Nicaragua	49, 500	1883	275, 815	1886	1, 770, 413	1, 747, 246
Paraguay	142, 916	1886	263, 751	1886	1, 535, 272	None.
Peru	463, 747	1876	2, 621, 844	1884	5, 785, 920	314, 032
Salvador	7, 225	1888	664, 613	1887	5, 101, 143	1, 662, 162
Uruguay	72, 175	1887	651, 112	1887	27, 373, 172	2, 986, 964
Venezuela	394, 374	1886	2, 198, 320	1886	15, 884, 728	10, 392, 569
United States	3, 581, 000	.....	.....	1889	742, 401, 375	.....
Central America (includes British Honduras)	175, 045	.....	2, 950, 376	.....	20, 902, 102	8, 625, 484
South America (includes Guiana and the Falkland Islands)	7, 546, 158	.....	32, 583, 757	.....	373, 713, 387	92, 135, 052
Total of Mexico, Central and South America	8, 492, 682	.....	45, 982, 116	.....	433, 235, 356	122, 014, 137

Countries.	Imports.			Miles of railway, 1889.
	Year.	Total.	From the United States in 1889.	
Argentine Republic	1887	\$81, 467, 056	\$9, 293, 856	4, 032. 5
Bolivia	1885	6, 820, 000	6, 838	106. 2
Brazil	1887	114, 335, 667	9, 531, 081	5, 260. 5
Chili	1887	52, 667, 831	2, 927, 794	1, 759. 9
Colombia	1887	6, 339, 379	3, 821, 017	226
Costa Rica	1887	4, 200, 919	983, 164	110. 5
Ecuador	1887	8, 333, 254	756, 211	40
Guatemala	1887	5, 312, 160	994, 701	103. 05
Honduras	1887	1, 215, 000	637, 175	69
Mexico	1888	43, 380, 000	11, 486, 896	5, 021. 66
Nicaragua	1886	1, 062, 040	1, 009, 687	90
Paraguay	1886	1, 399, 777	None.	92
Peru	1884	8, 044, 069	780, 835	1, 037. 01
Salvador	1887	3, 186, 798	701, 196	32
Uruguay	1887	29, 950, 402	2, 192, 848	400
Venezuela	1886	12, 053, 502	3, 738, 961	196
United States	1889	745, 131, 552	.....	.....
Central America (includes British Honduras) .....	.....	15, 800, 285	4, 695, 521	372. 05
South America (includes Guiana and the Falkland Isl'ds) .....	.....	364, 838, 005	35, 021, 017	13, 170. 02
Total of Mexico, Central and South America .....	.....	424, 018, 290	51, 203, 434	18, 563. 91

I.—Total values of merchandise imported into the United States from the British North American Possessions and of merchandise imported from the United States into and entered for consumption in the British North American Possessions during each year from 1850 to 1889, inclusive (see Note 5).

Years.	Imports into the United States from the British North American Possession.	Imports into the British North American Possessions from the United States.	Excess of imports into the United States.	Excess of imports into the British North American Possessions.
1850	\$5, 179, 500	\$11, 608, 641		\$6, 429, 141
1851	5, 279, 718	14, 263, 751		8, 984, 033
1852	5, 469, 445	13, 993, 570		8, 524, 125
1853*	6, 527, 559	19, 445, 478		12, 917, 919
1854	8, 784, 412	26, 115, 132		17, 330, 720
1855	15, 118, 289	34, 362, 188		19, 243, 899
1856	21, 276, 614	35, 764, 980		14, 488, 366
1857	22, 108, 916	27, 788, 238		5, 679, 322
1858	15, 784, 836	22, 210, 837		6, 426, 001
1859	19, 287, 565	26, 761, 618		7, 474, 053
1860	23, 572, 796	25, 871, 399		2, 298, 603
1861	22, 724, 489	28, 520, 735		5, 796, 246
1862	18, 515, 685	30, 373, 212		11, 857, 527
1863	17, 191, 217	29, 680, 955		12, 489, 738
1864	29, 608, 736	7, 052, 401		
1865	33, 264, 403	27, 269, 158	\$5, 995, 245	
1866	48, 528, 628	27, 905, 984	20, 622, 644	
1867	25, 044, 005	25, 239, 459		195, 454
1868	26, 261, 378	22, 644, 235	3, 617, 143	
1869	29, 293, 766	21, 680, 062	7, 613, 704	
1870	36, 265, 328	21, 869, 447	14, 395, 881	
1871	32, 542, 137	27, 185, 586	5, 356, 551	
1872	36, 346, 930	33, 741, 995	2, 604, 935	
1873	37, 649, 532	47, 223, 171		9, 573, 639
1874	34, 365, 961	53, 430, 424		19, 064, 463
1875	28, 270, 926	50, 319, 993		22, 049, 067
1876	29, 010, 251	45, 502, 201		16, 491, 950
1877	24, 277, 378	53, 524, 029		29, 246, 651
1878	25, 357, 802	50, 324, 123		24, 966, 321
1879	26, 133, 554	45, 196, 601		19, 063, 047
1880	33, 214, 340	41, 926, 563		8, 712, 223
1881	38, 041, 947	50, 955, 925		12, 913, 978
1882	51, 113, 475	55, 270, 580		4, 157, 105
1883	44, 740, 876	65, 018, 933		20, 278, 057
1884	39, 015, 840	59, 845, 968		20, 830, 128
1885	36, 960, 541	53, 397, 608		16, 437, 067
1886	37, 496, 338	49, 773, 232		12, 276, 894
1887	38, 015, 584	51, 937, 050		13, 921, 466
1888	43, 061, 123	54, 706, 161		11, 622, 038
1889	43, 009, 473	57, 412, 887		14, 403, 414

NOTES.

1. All of the above data are given for years ending June 30, except that the imports into the British Possessions from 1850 to 1863 are for calendar years, and those for 1864 are for the six months ending June 30.

2. The imports into the British Possessions from 1850 to 1867 comprise the imports into the provinces of Quebec and Ontario, as taken from the Canadian accounts, plus the exports to the other provinces of the present Dominion, as taken from the United States accounts; the imports into the British Possessions for the remaining years are taken exclusively from the Canadian accounts, with the following additions from the United States accounts, viz: 1868, exports to British Columbia, \$1,178,813; 1869, exports from Minnesota, \$182,682; 1870, exports from Minnesota, \$172,210; 1873 to 1889, exports from the United States to Newfoundland and Labrador. The accounts of these exports, which were exclusively by water, are reliable.

3. The imports into the United States for 1864 and from 1868 to 1887 include the imports from all British North American Possessions.

4. For the gradual formation of the present Dominion of Canada, see Statement No. 4.

5. The imports into the British North American Possessions from 1850 to 1875 inclusive are the imports entered for consumption, and those from 1876 to 1889 inclusive are the general imports of merchandise.

* Railway communication, Atlantic and St. Lawrence and Grand Trunk Railroad, established between the United States and Canada (between Montreal and Portland, Me.) in 1853.

II.—Imports and exports of merchandise into and from the United States from and to Mexico, Central America, the West Indies, and South America during the years 1821, 1830, 1840, 1850, 1860, and from 1866 to 1889 inclusive.

TRADE WITH MEXICO.

Years ending—	Export to			Imports from.	Total imports and exports.
	Domestic. <i>a</i>	Foreign.	Total.		
September 30—					
1821.....	(b)	(b)	(b)	(b)	(b)
1830.....	\$985, 764	\$3, 851, 694	\$4, 837, 458	\$531, 525	\$5, 368, 983
1840.....	969, 938	1, 545, 403	2, 515, 341	716, 109	3, 231, 450
June 30—					
1850.....	1, 498, 791	514, 036	2, 012, 827	575, 200	2, 588, 027
1860.....	3, 309, 379	2, 015, 334	5, 324, 713	1, 903, 431	7, 228, 144
1866.....	3, 701, 599	871, 619	4, 573, 218	1, 726, 092	6, 299, 310
1867.....	4, 823, 614	572, 182	5, 395, 796	1, 071, 936	6, 467, 732
1868.....	5, 048, 420	1, 392, 919	6, 441, 339	1, 590, 667	8, 032, 006
1869.....	3, 835, 699	1, 047, 408	4, 883, 107	2, 338, 164	7, 219, 271
1870.....	4, 544, 745	1, 314, 955	5, 859, 700	2, 715, 665	8, 575, 365
1871.....	5, 044, 033	2, 568, 080	7, 612, 113	3, 209, 688	10, 821, 801
1872.....	3, 420, 658	2, 122, 931	5, 543, 589	4, 002, 920	9, 546, 509
1873.....	3, 941, 019	2, 323, 882	6, 264, 901	4, 276, 165	10, 541, 066
1874.....	4, 016, 148	1, 930, 691	5, 946, 839	4, 346, 364	10, 293, 203
1875.....	3, 872, 004	1, 865, 278	5, 737, 282	5, 174, 594	10, 911, 876
1876.....	4, 700, 978	1, 499, 594	6, 200, 572	5, 150, 572	11, 351, 144
1877.....	4, 503, 802	1, 389, 692	5, 893, 494	5, 204, 264	11, 097, 758
1878.....	5, 811, 429	1, 649, 275	7, 460, 704	5, 251, 502	12, 712, 206
1879.....	5, 400, 380	1, 351, 864	6, 752, 244	5, 493, 221	12, 245, 465
1880.....	6, 065, 974	1, 800, 519	7, 866, 493	7, 209, 593	15, 076, 086
1881.....	9, 198, 077	1, 973, 161	11, 171, 238	8, 317, 802	19, 489, 040
1882.....	13, 324, 505	2, 158, 077	15, 482, 582	8, 461, 899	23, 944, 481
1883.....	14, 370, 992	2, 216, 628	16, 587, 620	8, 177, 123	24, 764, 743
1884.....	11, 089, 603	1, 614, 689	12, 704, 292	9, 016, 486	21, 720, 778
1885.....	7, 370, 599	970, 185	8, 340, 784	9, 267, 021	17, 607, 805
1886.....	6, 856, 077	831, 546	7, 737, 623	10, 687, 972	18, 425, 595
1887.....	7, 267, 129	692, 428	7, 959, 557	14, 719, 840	22, 679, 397
1888.....	9, 242, 188	655, 584	9, 897, 772	17, 329, 889	27, 227, 661
1889.....	10, 886, 288	600, 608	11, 486, 896	21, 253, 601	32, 740, 497

a In the absence of law providing for the collection of statistics of exports to adjacent foreign territory over railways, the values of exports to Mexico since 1883 have been considerably understated. According to the official information from Mexican sources the value of imports into that country from the United States during the year ending June 30, 1888, was \$19,264,673, including precious metals valued at \$38,362.

Railway connection established between the United States and Mexico April 10, 1884. (See Table III.)

b Not an independent country in 1821.

III.—Values of merchandise and of gold and silver coin and bullion imported into and exported from the United States from and to Mexico during each year ending June 30 from 1880 to 1889 inclusive, and exhibiting the values of imports and exports by land separately by customs districts, and the total values of the imports and exports by water.

MERCHANDISE.

Years ending June 30—	Carried in cars and other land vehicles.					
	Corpus Christi.		Paso del Norte.		Salzria.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1880.....	\$453, 876	\$643, 294	\$196, 804	.....	\$93, 989	\$340, 348
1881.....	495, 816	664, 180	216, 566	.....	106, 878	175, 991
1882.....	345, 374	2, 049, 696	154, 973	\$192, 379	131, 849	145, 191
1883.....	658, 194	1, 983, 254	325, 950	1, 162, 861	100, 084	850, 159
1884.....	490, 290	1, 626, 377	797, 967	962, 453	161, 617	891, 800
1885.....	756, 975	1, 154, 233	1, 058, 960	332, 935	232, 277	372, 231
1886.....	953, 184	1, 011, 196	1, 837, 396	51, 940	417, 168	145, 532
1887.....	905, 627	1, 050, 970	3, 531, 664	40, 909	210, 210	762, 669
1888.....	750, 258	1, 704, 086	4, 141, 534	32, 242	489, 297	1, 022, 588
1889.....	1, 510, 479	2, 119, 386	5, 115, 051	30, 551	1, 175, 832	1, 472, 078

III.—Value of merchandise and of gold and silver coin and bullion, etc.—Continued.

MERCHANDISE—Continued.

Years ending June 30—	Carried in cars and other land vehicles.					
	San Diego.		Other ports.		Total.	
	Imports.	Exports.	Imports.	Exports.	Impos.	Exports.
1880	\$34,550	\$14,488	.....	\$35,847	\$779,228	\$1,033,977
1881	52,269	46,441	.....	77,807	871,529	964,419
1882	49,294	42,933	.....	4,780	681,490	2,434,979
1883	55,762	101,402	\$119,363	219,317	1,259,353	4,317,023
1884	122,962	70,813	12,759	44,354	1,585,595	3,595,797
1885	61,912	62,241	566,240	59,531	2,676,364	1,981,171
1886	88,320	68,990	327,471	409,559	3,623,539	1,687,217
1887	83,950	89,337	271,270	98,498	5,007,721	2,042,283
1888	135,484	114,353	313,239	74,403	5,829,812	2,947,672
1889	164,611	192,928	375,584	79,909	8,341,557	3,894,852

Years ending June 30—	Carried in vessels.		* Total.		Total imports and exports.
	Imports.	Exports.	Imports.	Exports. ^a	
1880	\$6,430,365	\$6,832,516	\$7,209,593	\$7,866,493	\$15,076,086
1881	7,446,273	10,206,819	8,317,802	.....	19,469,040
1882	7,780,409	13,047,603	8,461,899	15,482,582	23,944,481
1883	6,917,770	12,270,597	8,177,123	16,587,620	24,764,743
1884	7,430,891	9,108,495	9,016,486	12,704,292	21,720,778
1885	6,590,657	6,359,613	9,267,021	8,340,784	17,607,805
1886	7,064,433	6,050,406	10,687,972	7,737,623	18,425,595
1887	9,717,119	5,917,274	14,719,840	7,959,557	22,679,397
1888	11,500,077	6,950,100	17,329,889	9,897,772	27,227,661
1889	12,912,044	7,592,044	21,253,601	11,486,896	32,740,497

^a See note to Table II.

COIN AND BULLION.

Years ending June 30—	Carried in cars and other land vehicles.					
	Corpus Christi.		Paso del Norte.		Saluria.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1880	\$130,167	.....	\$487,078	.....	\$5,461	.....
1881	169,435	.....	425,097	.....	12,027	.....
1882	323,091	.....	313,753	.....	8,988	\$8,762
1883	1,036,995	\$22,950	1,076,606	.....	823	20,478
1884	1,350,835	875	2,946,736	.....	38,348	112,248
1885	781,103	37,818	9,418,959	.....	5,956	.....
1886	725,863	90,979	12,585,015	.....	9,136	.....
1887	698,904	23,767	10,598,215	.....	22,373	163,200
1888	491,866	32,687	10,225,041	.....	21,548	242,146
1889	513,927	10,318	13,103,596	.....	338,241	51,565

Years ending June 30—	Carried in cars and other land vehicles.					
	San Diego.		Other ports.		* Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1880	\$622,706	.....
1881	606,559	.....
1882	645,832	\$8,762
1883	2,162,414	43,428
1884	\$47,990	.....	4,355,919	113,123
1885	10,206,018	37,818
1886	13,320,014	90,979
1887	11,319,492	186,967
1888	10,738,455	274,833
1889	13,955,764	61,883

III.-- *Values of merchandise and of gold and silver coin and bullion, etc.*—Continued.

COIN AND BULLION—Continued.

Years ending June 30—	Carried in vessels.		Total.		Total imports and exports.
	Imports.	Exports.	Imports.	Exports.	
1880.....	\$8,493,118	\$3,371	\$9,115,824	\$3,371	\$9,119,195
1881.....	8,529,765	1,500	9,136,324	1,500	9,137,824
1882.....	5,986,106	9,684	6,631,938	18,446	6,650,384
1883.....	7,620,572	53,536	9,782,986	96,964	9,879,950
1884.....	8,679,982	222,512	13,015,901	335,635	13,351,536
1885.....	4,713,593	41,588	14,919,611	79,406	14,999,017
1886.....	3,615,382	19,056	16,935,396	110,035	17,045,431
1887.....	3,536,273	92,845	14,855,765	279,812	15,135,577
1888.....	3,294,182	44,575	14,032,637	319,408	14,352,045
1889.....	3,601,484	114,733	17,557,248	176,616	17,733,864

* See remarkable development of traffic in consequence of railway communication, established April, 1884.

RAILWAY CONSTRUCTION AS BEARING UPON POPULATION, WEALTH, AND DEVELOPMENT.

The miles of railway, population, and farming products are given up to 1889. The miles of railway are exact. The population given is from estimates made in the Census Office, and the products are from reports to the Agricultural Department. The statistics of manufactures and wealth are taken from the Census reports of 1880, and to these figures we have added for the increase since 1880 amounts equal to the increase shown between 1870 and 1880. It is certain that the forthcoming census of the present year will show figures greatly in excess of those we have given.

One of the greatest industries of the country, that of mining, which has developed perhaps more rapidly than any other, shows almost fabulous proportions in some sections we have omitted entirely, as we have been unable to find reliable statistics of the mining interests by States.

Railways, population, and wealth.

	Railways.	Population.	Wealth.
<i>Arkansas</i> (area, 53,850 square miles):	<i>Miles.</i>		
1860.....	38	435,450	\$219,256,000
1870.....	256	484,471	156,394,000
1880.....	854	802,525	246,000,000
1888.....	2,046	1,140,000	336,000,000
Increase 1888 over 1860.....	2,008	706,550	116,744,000
<i>California</i> (area, 158,360 square miles):			
1860.....	23	379,994	207,874,613
1870.....	925	560,247	638,767,017
1880.....	2,220	864,694	1,430,000,000
1888.....	4,126	1,350,000	2,220,000,000
Increase 1888 over 1860.....	4,103	970,006	2,012,125,387
<i>Illinois</i> (area, 56,650 square miles):			
1860.....	2,790	1,171,951	871,864,282
1870.....	4,823	2,539,991	2,121,680,579
1880.....	7,851	3,077,871	3,092,000,000
1888.....	9,900	3,750,000	4,070,000,000
Increase 1888 over 1860.....	7,110	2,578,049	3,198,139,718
<i>Kansas</i> (area, 82,080 square miles):			
1860.....	.....	107,206	31,327,895
1870.....	1,601	364,399	188,892,014
1880.....	3,400	996,096	575,000,000
1888.....	8,755	1,618,000	961,118,000
Increase 1888 over 1860.....	8,755	1,410,794	929,790,105

Railways, population, and wealth—Continued.

	Railways.	Population.	Wealth.
Missouri (area, 69,415 square miles):			
1860	817	1,182,012	501,214,398
1870	2,000	1,721,295	1,284,922,897
1880	3,965	2,168,380	1,530,000,000
1888	5,901	2,750,000	1,775,000,000
Increase 1888 over 1860	5,084	1,567,988	1,273,785,602
Texas (area, 265,780 square miles):			
1860	307	604,215	365,200,614
1870	711	818,579	159,052,542
1880	3,244	1,591,749	725,000,000
1888	8,211	2,060,000	1,291,000,000
Increase 1888 over 1860	7,904	1,455,785	925,799,386

Products for the year.

	Corn.	Wheat.	Oats.	Potatoes.	Hay.	Cattle.	Value of manu- factures.
Arkansas (area, 53,850 square miles):	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Tons.</i>	<i>No.</i>	
1860	17,823,588	957,601	475,268	418,000	9,356	567,799	\$2,880,578
1870	13,382,145	741,736	528,777	422,196	6,839	357,935	4,629,234
1880	24,156,417	1,269,715	2,219,822	402,027	20,630	708,243	6,756,159
1888	42,608,000	1,794,000	4,848,000	864,000	56,235	824,539	8,883,159
Increase 1888 over 1860	24,784,412	836,399	4,372,732	446,000	46,877	256,760	6,002,581
California (area, 158,360 square miles):							
1860	510,708	5,928,470	1,043,006	1,789,463	305,655	1,180,142	68,253,228
1870	1,221,222	16,676,702	1,757,507	2,049,227	551,773	631,398	66,594,556
1880	1,993,325	29,017,707	1,341,271	4,550,565	1,045,119	664,307	116,218,973
1888	4,464,000	43,781,000	1,899,000	4,442,000	1,539,454	985,176	165,843,000
Increase 1888 over 1860	3,953,292	37,852,530	855,994	2,652,537	1,233,799	194,966	97,589,772
Illinois (area, 56,650 square miles):							
1860	115,174,777	23,837,023	15,220,029	5,540,390	1,774,554	1,583,813	57,580,886
1870	129,921,395	30,128,405	42,780,851	10,944,790	3,747,339	1,715,586	205,620,672
1880	325,792,481	51,110,502	63,189,200	10,365,707	3,276,819	2,384,322	414,864,673
1888	259,125,000	38,014,000	145,364,000	11,706,000	4,625,482	2,505,302	624,108,000
Increase 1888 over 1860	143,950,223	14,176,977	130,143,971	6,165,610	2,850,928	921,489	566,527,114
Kansas (area, 82,080 square miles):							
1860	6,150,727	194,173	88,325	296,335	56,232	93,455	4,357,408
1870	17,025,525	2,391,198	4,097,925	2,342,988	490,289	373,967	11,775,833
1880	105,729,325	17,324,141	8,180,385	2,894,198	1,601,932	1,451,057	30,843,777
1888	240,508,000	30,912,000	37,529,000	9,063,000	1,935,450	2,315,994	49,900,000
Increase 1888 over 1860	234,357,273	30,717,827	37,440,675	8,766,665	1,879,218	2,222,539	45,542,592
Missouri (area, 69,415 square miles):							
1860	72,892,157	4,227,586	3,680,870	1,990,850	401,070	1,168,984	41,782,731
1870	66,034,075	14,315,926	16,578,313	4,238,361	615,611	1,153,695	206,213,429
1880	202,414,413	24,966,627	20,670,958	4,189,694	1,083,929	2,080,932	153,356,205
1888	218,841,000	20,639,000	36,384,000	6,044,000	1,802,494	2,181,007	200,000,000
Increase 1888 over 1860	145,948,843	16,411,414	32,703,130	4,053,150	1,401,424	1,012,023	158,217,269
Texas (area, 265,780 square miles):							
1860	16,500,702	1,478,345	985,889	174,182	11,865	3,535,768	6,577,202
1870	20,554,538	405,112	762,263	208,363	18,982	3,494,043	11,517,302
1880	29,065,172	2,567,727	4,893,359	228,832	48,530	4,084,605	20,719,928
1888	83,688,000	6,189,000	14,808,000	700,000	189,795	7,923,690	30,000,000
Increase 1888 over 1860	67,187,298	4,710,655	13,822,111	525,818	177,930	4,387,922	23,422,798

THE RAILWAYS OF URUGUAY.

REPORT OF ALBERTO NIN, DELEGATE FROM URUGUAY.*

WASHINGTON, January 6, 1890.

Mr. CHAIRMAN: To satisfy the desires of the committee over which you so worthily preside, I have the pleasure to send herewith a pamphlet arranged *ad hoc*, which contains all the legislation on railroads at present in force in Uruguay, and a map which graphically illustrates its railway system.

As the chairman will observe, this system radiates from Montevideo, capital of the Republic, and terminates, by way of the center, at the north and the extreme eastern and western limits on the frontier of Brazil, and by way of the west in the Uruguay River, which separates the Republic from that of the Argentine, so that its junction with whatever line may be established to put the country which I have the honor to represent in communication with the other nations of America would be as easy to carry out as it would be at once practicable, since the great trunk lines of the Uruguayan system will be complete and open to the public service in all extent during the present year.

The general railroad system law establishes, moreover, a valuable guaranty to the capitals invested by private enterprises, but notwithstanding these circumstances, I believe it proper to state, at this time, that if it should be necessary and advisable to join in obtaining the most perfect communication with the other nations of America, Uruguay would not be very far behind in conceding especial favors which would assure that result.

To this end, it is pleasant to me to salute the chairman with my most distinguished consideration and appreciation.

ALBERTO NIN.

Hon. JUAN F. VELARDE,
Chairman Committee on Railroads,
International American Congress.

* Translation.

THE RAILWAYS OF VENEZUELA.

*REPORT OF JOSÉ ANDRADE, DELEGATE FROM VENEZUELA, TO THE COMMITTEE ON RAILROADS OF THE INTERNATIONAL AMERICAN CONFERENCE.**

At the end of 1887 Venezuela had 232 kilometers of railroad open to public traffic and 407 kilometers under construction, besides 1,982 kilometers contracted for or projected.

Since 1887 there have been finished and opened to the public the line from Puerto Cabello to Valencia, 54 kilometers; that from Barcelona to the coal mines, 19 kilometers; that from La Luz to Barquisimeto, Tocuyo, and Trujillo, 350 kilometers, and that from Caracas to Trujillo, 54 kilometers. The construction of a railroad from Caracas to Victoria has also been begun, and is already well advanced, and it is now to be extended to San Carlos, beyond Valencia, under the name of the Grand Trunk Line of Venezuela. Lately contracts have been made for the construction of new lines which can not be specified at this moment. The Memoirs of Public Credit of 1888 and 1889, give an account of all these contracts with their minor details, and in those of the Treasury Department can be seen the annual earnings and expenses of the lines in actual operation.

In the Engineers' Handbook, published at Caracas in the same year of 1887 by Dr. Jesús M^a Muñoz-Tébar, present minister of public works in Venezuela, and perhaps the best-known railroad engineer in that country, will be found exact information about the native woods most employed in such works, with their common and botanical names, their resistance and price, the weight and price of brick, ballast, etc., and of various materials for pottery found near Caracas. It also contains the barometrical altitudes of some points of Venezuela in the neighborhood of Caracas, on the ridges of the central coast chain which divides the valley of Caracas from those of the Tuy; along the highway of the south which leads to those valleys; on the coast range of Venezuela, the peak of Naigevatá, and chair of Caracas; the Ávila and the other mountains to the north of Caracas; Agua Negra and the other mountains to the west of Caracas; and the interior chain between the rivers Tuy and Guárico. A copy of the Engineers' Handbook mentioned is herewith inclosed.

There is also inclosed a pamphlet abounding in information, entitled

"Document Relating to the Railroad of Ceiba," 1888, in Spanish, French, and English, together with a copy of the Statistical Annual of Venezuela for the year 1887, in which will be found, among other information, the following relating to railroads:

Complete list of railroads of Venezuela up to date, divided into three classes:

Those constructed and in operation, those under construction, and those merely contracted for.

Diagram of the railroad from La Guayra to Caracas.

Diagram of the railroad from Caracas to Santa Lucía.

Diagram of the railroad from Puerto Cabello to Valencia.

Extract from the immigration law.

Extract from the land-grant law.

Extract from the law guaranteeing 7 per cent. upon capital invested in the construction of railroads.

It is probable that complete copies of all laws relating to railroads, and the Statistical Annuals for 1888 and 1889, may soon be presented to the committee.

No map of the Republic other than that found in the Statistical Annual can be found here, and I do not know in what part of the United States one of larger dimensions and equal accuracy can be obtained.

WASHINGTON, *January 18, 1890.*

APPENDIX

TO THE

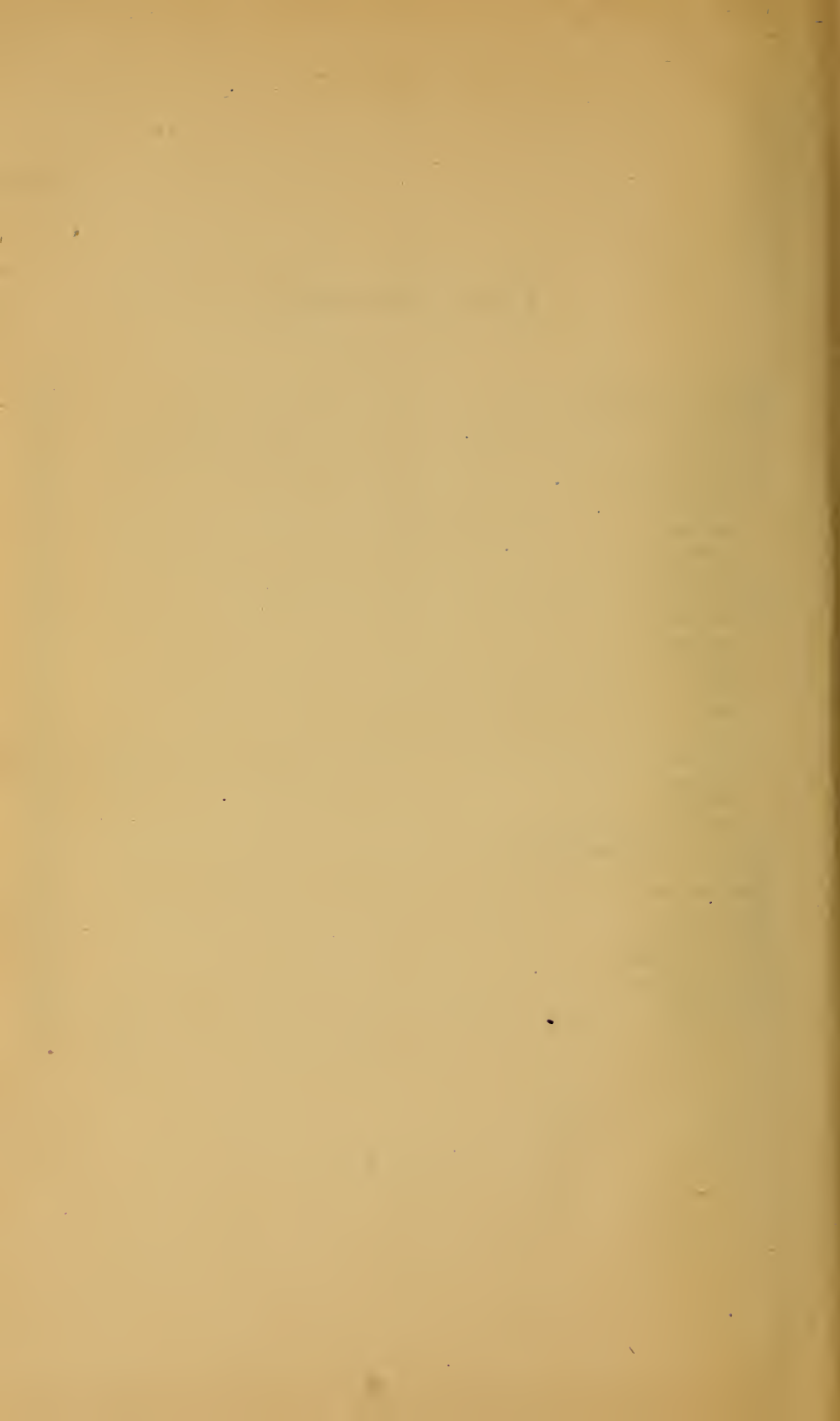
REPORT

OF THE

COMMITTEE ON RAILWAY COMMUNICATION.

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LETTER OF TRANSMITTAL.

WASHINGTON, D. C., *March 19, 1890.*

GENTLEMEN: At your request I have obtained the following information with reference to the railways of Mexico, Central and South America, and the prospects of railway building in these countries, especially with reference to an intercontinental line. I have examined the libraries of the city, the Bureaus of the War, Navy, and other Departments, and have had the benefit of reading the reports of the Spanish-American Delegates to the railway committee.

The Spanish-American countries naturally form three groups, viz: Mexico, Central America, and South America. The topographical features of each group and of each country are briefly described. Where railway development is extensive, a mere statement of this is sufficient; where little has been done, more detailed information seemed necessary, and especially as to those countries which the Intercontinental Line would probably traverse. All the railways are given and the important ones described with such other information as seemed valuable; but details have been omitted when given in the reports of the Delegates.

A plan for an Intercontinental Railway has been outlined from a study of all the information obtainable; and, as a matter of interest in this connection, because of the diversity of existing gauges, and of the rapidity with which timber is destroyed in some of these countries, articles on railway gauges and metal ties have been added. Attention is also called to the method of making topographical surveys in various countries.

Tables are given of elevations and distances in these countries and of all the railways built and projected. Where no distinct statement of the distance between the two points could be found it was measured upon all the maps.

For future reference a list of the maps and books from which I have obtained information is submitted.

Very respectfully, your obedient servant,

GEO. A. ZINN,

First Lieutenant, Engineers, U. S. Army.

Hon. H. G. DAVIS and ANDREW CARNEGIE,

Members of the Committee on Railway Communication,

of the International American Conference.



MAP
showing the principal Railways
in
MEXICO
and
CENTRAL & SOUTH AMERICA,
AND STATE OF THEIR CONNECTIONS IN THE
UNITED STATES
1890.

Explanations

————— Lines of Railroads in operation
----- Proposed future continental lines
..... Proposed lines







MEXICO.

The railway system of this country has been so well developed that little need be said beyond describing the important lines. As early as 1837, a concession was granted for the building of a line from Vera Cruz to the City of Mexico; but the first real work was not done upon it until 1857. The success of this railway after its opening, in 1873, led to the projection of others by United States capitalists, having the City of Mexico as their objective points. The first of these to take tangible shape was the Mexican Central from El Paso, Tex., where it connects with the Southern Pacific Railway of the United States. The Mexican Government granted liberal concessions of money and land for the building of other lines, most of which have the City of Mexico as a terminal. The theory of these was to have, as well as the through line, branches leading to the Pacific and to the Gulf coast, and a glance at the map will show that some of these have been built. Some of the Mexican lines were projected from the United States to a good port on the Pacific coast to form transcontinental lines. The Sonora Railway and the Texas, Topolobampo and Pacific Railway are examples. The Tehuantepec line was projected to connect the Gulf directly with the Pacific.

A line has been projected from the City of Mexico to Central America, and is now under construction.

Many concessions have been granted by the Mexican Government for the building of railways, and it has been very liberal in donating money and lands; some of these concessions have been forfeited from failure to comply with the conditions imposed, and others are not likely to be carried into effect.

I have described first the lines leading south from the border line of Mexico and the United States, and then named the other lines:

SONORA RAILWAY.

The Sonora Railway, from Nogales, Mexico, to Guaymas, Mexico, 262.41 miles, was opened from Guaymas to Hermosillo, 90 miles, in November, 1881, and to Nogales in October, 1882. It is owned by the Atchison, Topeka and Santa Fé Railroad Company, and with the New Mexico and Arizona Railroad forms the Sonora Division of the Atchison Company's system of roads.

Leaving Benson the line takes a southwesterly direction through the lower part of Arizona to Nogales on the Mexican frontier, 88 miles distant.

This road extends through a fine cereal and grazing country. Another line is to be constructed from Hermosillo (263 miles from Benson), via Ures, Arispe, Bachnachi, and Espia, to Paso del Norte. The population of Guaymas is about 6,000.

When fast trains are put on the Atchison, Topeka and Santa Fé, the journey may be made from New York to Guaymas in five days and a few hours. This line is expected to facilitate communication with Australia, while it also gives traders of the Mexican, Central and South American coasts an opportunity to send their products

quickly to the Mississippi Valley, the East, and the large cities that lie between the Gulf of Mexico and the Great Lakes.

There is immense mineral wealth in Sonora; mines of gold, silver, iron, lead, copper, antimony, tin, and sulphur are found in the region adjacent to the railway. Deposits of carbonate of soda, alum, marble, salt, and gypsum are also abundant. One of the most important mineral deposits of Sonora is anthracite, recently discovered at Barranca on the Yaqui River. The coal is found in sandstone and conglomerate and is said to contain 90 per cent. of carbon. Among other products reached by this railroad are sugar-cane, tobacco, rice, rosewood, ebony, logwood, and Brazilwood.

The cost of its property was \$10,972,796. Its earnings in 1888 were \$221,761.99.

MEXICAN CENTRAL.

The Mexican Central from El Paso, Tex., to the City of Mexico, 1,224.1 miles, with branches from Aguas Calientes to San Blas on the Pacific coast, and to Tampico on the eastern coast, from Silao to Guanajuato, 11.4 miles, and from Guanajuato to Irapuato, 161 miles. Of the San Blas division only 16.6 miles are completed, and of the Tampico division, the line to San Luis Potosi, 130.7 miles was opened in June, 1889, and at the present time there remains less than 50 miles to be completed. It is believed that the entire division will be opened for traffic by March 31, 1890.

This is the longest of any Mexican line, and has a subsidy of \$9,500 per kilometer, or in all amounting to about \$32,000,000. It runs through a country rich in mineral and agricultural resources, and connects the largest centers of population in Mexico, although it crosses certain areas of sterile plains in the north.

This road was incorporated in Massachusetts February 25, 1880, and in the same year purchased of the Guanajuato Railway Company 60 kilometers of narrow-gauge railway, which was widened and incorporated into the main line. The entire main line was completed March 8, 1884, and opened April 10, 1884. The Guadalajara division was opened from Irapuato, May 21, 1888.

The subsidy acquired by this company covered the main line, the Tampico and Guadalajara divisions, and is payable from custom-house receipts. The company has the right to import free of duty all material required for construction, maintenance, and operation of its lines, is exempted from taxation till the expiration of fifty years after completion of all the lines, and has the right to construct and operate its telegraph lines for ninety-nine years. Small additional subsidies were given by the State governments of San Luis Potosi and Guanajuato. The Government of Mexico, on June 1, 1885, suspended the payment of its subsidy.

This road runs through the center of the great plateau, the healthiest region in the world. As a rule the grades are gentle, but exceedingly rough hill-work was found in the States of Guanajuato, Zacatecas, and Durango, and near the City of Mexico. The road passes through Chihuahua, 12,000 inhabitants; Zacatecas, 30,000; Aguas Calientes, 31,880; Silao, 4,000; Guadalajara, 71,000; San Luis Potosi, 34,000; Tampico, 7,000; Queretaro, 48,000; Guanajuato, 63,000; Celaya, 10,000; Irapuato, 21,000; Leon, 74,000; Mexico, 260,000.

	Miles.
Main lines, City of Mexico to El Paso.....	1,224.0
Guanajuato Branch, Silao to Guanajuato	11.4
Branch to stone quarry.....	6.5
Tampico division, Tampico, westerly	117.8
Tampico division, main line junction to San Luis Potosi	130.7
San Blas division	16.6
Guadalajara division, Irapuato to Guadalajara	161.0

Total length of lines owned, 1888..... 1,663.0

Average number of miles operated during the year, 1,316.4. Gauge, 4 feet 8½ inches; rail, steel, 56 pounds.

Operations for year ending December 31, 1883.—Train mileage, passenger, and freight statistics not reported. Earnings, \$5,774,331.31, or \$4,386.40 per mile.

Expenses:

Maintenance of way	\$782,523.18
Maintenance of cars	218,102.96
Motive power	1,416,425.86
Transportation	819,463.99
Miscellaneous	181,321.57

Total, (\$2,597 per mile)	3,418,837.56
Net earnings (40.79) per cent	2,355,493.75

This is net currency. Equivalent in United States money to \$1,748,451.95.*

Railway commerce.—The Mexican Central Railway, from El Paso del Norte to the City of Mexico, was completed in 1884, and Paso del Norte, as its northern terminus, at once became the most important town on the frontier. The commerce of the place sprang almost immediately from insignificance to considerable proportions, and is now exceeded by but one city in the whole Republic. Not only did the through traffic swell beyond all comparison with its former condition but the local trade was also augmented. The Mexican collector of customs informed me that in 1884 he forwarded to the ministerio de hacienda an estimate of the amount of merchandise on hand at Paso del Norte, in the stores of the place, which he then computed, approximately, as amounting to \$50,000. Effects on hand in these establishments, which are principally retail, can not now be estimated at less than twelve times that value.

It was thought by many that the construction of the International Railway through Piedras Negras and of the Mexican National at Laredo would divert much of the traffic from the Mexican Central, and consequently diminish the commercial importance of El Paso and Paso del Norte. Both of the first named routes are much shorter than the Mexican Central line, as will be seen from the following table:

Distances to City of Mexico from—	Via El Paso.	Via Eagle Pass.	Via Laredo.	In favor of Laredo over El Paso.
	Miles.	Miles.	Miles.	Miles.
New Orleans	2,433	1,836	1,578	855
New York	3,640	3,210	3,015	634
Chicago	2,866	2,471	2,236	630
St. Louis	2,584	2,189	1,950	634
Kansas City	2,398	2,080	1,821	577

This greater proximity to the centers of commerce above enumerated resulted during the first four months, in the loss of considerable traffic to the El Paso route, but recently much of this business has returned to the Mexican Central, and but little apprehension is entertained of any permanent loss from the competition and advantages offered by the rival roads.

It is claimed that the Mexican Central places freight in the City of Mexico in less time than the Mexican National, notwithstanding the greater distance over which their merchandise is transported. This dispatch may be explained partly by the superior organization and partly by the superior road-bed and equipments of the first-named railway. The Mexican National labors under the disadvantages of a narrow gauge, and the International is obliged to pass their cars over the Central line from Laredo to the City of Mexico. In addition to this, the Mexican Central connects the important cities of Chihuahua, Laredo, Zacatecas, Queretaro, Aguas Calientes, Guanajuato, Guadalajara, and Leon, the commerce of which this road will always control.—(Report of Consul Mackey, Paso del Norte, March 22, 1889.)

MEXICAN NATIONAL.

A concession generally known as the Palmer-Sullivan concession was granted to the Mexican National Construction Company by an act of the Mexican Congress of September 13, 1880, for the following named lines of railway: From the City of Mexico to the Pacific coast at the port of Manzanillo, or between that port and La Navidad, passing through the towns of Toluca, Maravatio, Acambaro, Morelia, Zamora, and La Piedad, and from a point on the foregoing line between Maravatio and Mo-

* Poor's Manual.

relia to a point on the northern frontier at Laredo, or between Laredo and Eagle Pass, passing through the towns of San Luis Potosi, Saltillo, and Monterey; the railroad thus constructed to be 3 feet gauge. An additional concession given January 10, 1883, granted the right to extend this system from the port of Matamoros through Mier to Monterey, and from San Luis Potosi through Zacatecas to Lagos. These concessions granted the payment of a subvention of \$11,270 per mile (\$7,000 per kilometer) on the line from the City of Mexico to the Pacific and of \$10,460 per mile on the line to the northern frontier. They granted the right to bring materials duty free, right of way over government lands, right to all mineral deposits discovered, exemption from taxation, and other privileges and immunities. The company was bound to complete 280 miles of track every two years, the line to the Pacific within five years, to the northern frontier in eight years, dating from September 30, 1880; and at the end of ninety-nine years the railway should revert to the Government, with the right to purchase rolling stock from the company. The time was afterwards extended to completion in ten years from July 15, 1886, the distance was reduced to 155 miles in each two years, and a fine was imposed if this should not be complied with, and other minor modifications. Construction was begun October 14, 1880. The division from Laredo through Monterey to Saltillo, 236 miles, was completed September 14, 1883. The southern division was completed from City of Mexico through Toluca to San Miguel de Allende, 254 miles, November 29, 1883.

The Pacific division was completed from Acambaro through Morelia to Patzcuaro June 1, 1886. This line had been surveyed all the way to Colima through Uruapan. The Matamoros division is completed to San Miguel, 75 miles. The section between Zacatecas and the suburb of Guadalupe, 5 miles, is operated at present by animal traction and was purchased in 1881. The company has also acquired, by purchase, the line between the City of Mexico and El Salto, and the line through Texas from Laredo to Corpus Christi, 161 miles. A few miles of track has been laid from the port of Manzanillo. By the concession of June 2, 1883, the company was granted the right to construct a line completely around the City of Mexico, with branch lines to Tlalpam, San Angel, and Contreras. Of this line, called the Cintura or Belt, the important section that connects the several railways entering the city is completed and in operation.

The property of this company was sold under foreclosure May 23, 1887, and the company was reorganized. (For reorganization see Poor's Manual for 1887, page 935.) The through line was completed September 28, 1888, and opened for traffic November 1, 1888.

This road passes through the important cities of Monterey, 42,000; Saltillo, 17,000; San Luis Potosi, 34,000; Acambaro, 17,000; Maravatio, 12,000; Toluca, 12,000; Morelia, 25,000; Colima, 31,000. It is expected that the line from San Miguel to Laredo will be completed in fifteen months from July, 1889.

	Miles.
Main line of road, City of Mexico to New Laredo.....	838. 63
El Salto line, City of Mexico to El Salto.....	42. 41
Patzcuaro branch, Acambaro to Patzcuaro.....	95. 85
Belt line, Santiago to La Garita de San Lazaro.....	3. 17
Matamoros division, Matamoros to San Miguel, Mexico.....	75. 50
Texas Mexican Railway, Corpus Christi to Laredo and branch.....	162. 03
Brownsville and Gulf, Rio Grande River through Brownsville, Tex.....	1. 00
Total of above lines.....	1, 218. 59
Add lines named in paragraph following.....	13. 65
Total length operated December 31, 1888.....	1, 232. 24

Gauge 3 feet; rail, steel and iron, 40 and 45 pounds.

In addition to the above mileage are the following lines which are unused or used only as side tracks, special service tracks, and tramways: El Salto towards Tepeji, 2.5; Quarry branch from Naucalpan Junction to Quarry, 2.8; branch in New Laredo, 1.

Operations for 1888.—Train mileage, passenger, and freight traffic not reported.

Earnings:

Passenger	\$599, 194. 00
Freight.....	1, 649, 347. 83
Mail.....	11, 227. 14
Other earnings	145, 121. 70
Total.....	2, 404, 891. 53

Expenses:

Transportation.....	509, 883. 10
Motive power.....	820, 007. 57
Maintenance of cars.....	97, 278. 47
Maintenance of way	753, 199. 35
Extraordinary expenses.....	45, 081. 90
General expenses	115, 630. 00

Total..... 2, 341, 086. 43

Net earnings..... 63, 811. 10

Reduced to United States currency this equals \$51,048.88. Add interest, discount, and exchange, \$71,022.44. Available revenue, \$122,071.32 Paid interest on Texas, Mexican Railway Company bonds, \$60,880. Balance surplus, \$61,191.32.*

A loan of \$3,000,000 has recently been negotiated for the purpose of purchasing new rolling stock and laying a third rail from Laredo to the City of Mexico—work to begin at once.

THE MEXICAN INTERNATIONAL.

This company was organized December 9, 1882, under special charter from the State of Connecticut. In 1883 it acquired certain concessions granted by the Government of Mexico under date of June 7, 1881, November 4, 1881, April 1, 1882, which authorized the construction and operation of a line of railroad and telegraph between the City of Mexico and the Rio Grande, terminating at or near Piedras Negras (Eagle Pass), with the right to construct another line from a convenient point on the main line to some point on the Gulf of Mexico, between Matamoros and Vera Cruz; also another line to the Pacific Ocean at some point between Mazatlan, Zihuatanejo, and also such branches as the company deem desirable from each side of the lines above mentioned, said branches to be subject to the approval of the department of public works and not to exceed 100 miles each in length.

It is stipulated in the concession that the road and its appurtenances shall be exempt from taxation for fifty years, and that the materials required for construction, operation, and repair of the road shall be free from import and other duties. No subvention is granted, but the Government has obligated itself not to give a subvention to any other line of railroad within 50 miles on either side of the lines so authorized. About 70 miles, extending from Piedras Negras to Sabinas and including the part within Mexican territory at the International bridge over the Rio Grande, were completed in 1883. In 1884, 89.37 miles of the main line were completed, and also 10.84 miles of the Lampazos branch, the latter thus reaching the coal fields of San Felipe. The track of the main line was completed January 12, 1888, to Torreon, where connection is made with the Mexican Central Railroad. The operation of the road to Torreon was commenced March 1, 1888.

The theory of all these lines is to have an interoceanic line, as well as a main line north and south.

Main line, Piedras Negras, Mexico to Torreon, Mexico, 383.4 miles. Lampazos Branch, completed from near Sabinas Station on main line to Hondo, 12.31 miles. Total 395.71 miles.

Gauge, 4 feet 8½ inches; rail, steel, 54 pounds.

THE MEXICAN SOUTHERN.

From Laredo another road was projected to the City of Mexico. The original concession for building it was granted May 26, 1881. It has been called "*The Mexican Southern*," "*The Mexican Oriental*," "*The International and Interoceanic*."

The following is a condensed itinerary of this route :

A station had been erected at New Laredo, and on September 1, 1883, about 100 miles of road had been graded, but only half a mile of track had been completed. From New Laredo the route will follow the course of the Rio Grande to Mier, via Guerrero. Leaving Mier the road goes southward to China. The company has the option of constructing a branch to Matamoros, 100 miles distant from Mier. There are wagon roads from China to Monterey (60 miles) and also to Matamoros (90 miles). The line then passes to the eastward of Teran and Linares, running almost due south from China to Victoria, 270 miles from New Laredo. It lies on the border of the *Tierra templada*. From Victoria the line will have a southeasterly direction, crossing the Rio Panuca near Tanjoco, 45 miles from its mouth.

The company has the option of building branch roads to Tampico and to San Luis Potosi, but it is not probable that it will compete with the Mexican Central between these points.

The line will be easy to construct as far as Victoria. South of this station it will extend through the mountains on the eastern edge of the great table-land, and will require rather heavy grades and some tunneling. This division will traverse the Huasteca country, one of the richest portions of the Republic both in agricultural products and mineral deposits.

The proximity of this railway to the sea-board should also be considered. This company has also the choice of extending branch roads to Tuxpan and Vera Cruz. This would, of course, be a formidable opposition line to the Mexican Railway. Judging from the topography of the country, this road will be easier to construct than the Mexican Railway.

The southern division may be described as follows :

Leaving the City of Mexico the line will run parallel with the Mexican Railway (it is not allowed to cross it) to Irolo, 45 miles from the City of Mexico the track will be continued over a level country to Puebla (111 miles), thence southeasterly to Tehuacan (182 miles), from which place there is a tramway to Esperanza, on the Mexican Railway, 31 miles distant.

The road will go south from Tehuacan, following the Rio Salado for several leagues to Arenal, where the Salado and Cuicatlan Rivers unite and form the Rio Quiotepec. Arenal is 237 miles from the capital. A branch line is under construction from Anton Lizardo, on the Gulf of Mexico, toward Arenal via Amapa and Tuxtepec. Anton Lizardo is 142 miles from Arenal Junction. The former town is the only good port on the Gulf coast. The eastern division will be extended to Vera Cruz 23 miles distant. But little artificial grading will be required on the eastern division, and the heaviest grade, according to the surveys, is 72 feet to the mile.

From Arenal the main line will run almost due southward along the Rio Cuicatlan through a well-timbered region to Sedas (301 miles), and thence to Oaxaca, 350 miles (population 26,228, elevation about 5,000 feet). Leaving Oaxaca the railway will run southward with a descending grade to Amatlan, Ejntla, and Miahuatlan, the latter being about 65 miles from Puerto Angel, the principal port of the State, and at which the Pacific Mail steamers touch.

From Miahuatlan the road takes an easterly course over a rugged country to the town of Tehuantepec (523 miles), 10 miles from La Ventosa on the coast. The Pacific Mail steamers stop at the adjoining port of Salina Cruz, which has a good harbor and will become the terminus of the projected railway across the Isthmus. The Mexican Southern will make connection with the Tehuantepec road at the station of that name. The former road will be extended eastward from the town of Tehuantepec

(population 12,000) to Tonalá on the coast, where the Pacific Mail steamers stop once a month. Leaving Tonalá the main line bifurcates, one branch running northeasterly to San Cristóbal, the other to Tapachula and thence probably to the City of Guatemala.

The region traversed by the southern division of this railway lies mostly in the States of Vera Cruz, Oaxaca, and Chiapas. It is very rich in mineral deposits and agricultural products. The climate is salubrious and the vegetation luxuriant along the greater part of the route. The State of Oaxaca contains valuable mines of gold, silver, iron, copper, and mercury; the cereals, brown beans, and tobacco, are grown in abundance, and petroleum is found near Puerto Angel. The States of Vera Cruz and Chiapas are rich in coffee, sugar cane, cocoa, tobacco, indigo, vanilla, and India rubber.

Here (Laredo) the "Oriental," the southern corner of the vast Gould system of railroads, leaps straight across the river, penetrates the *tierra caliente*, or hot coast region, and draws a direct line for Mexico City. Thence it will be continued southward to the "Mexican Southern," a concession controlled by General Grant, and eventually may penetrate the confines of Guatemala, and even Central and South America. Who knows? With a management presided over by the greatest general of our armies and the skillful organizer of our railways it is possible that within a decade of years one may obtain over the Gould system of roads a through ticket from New York to Panama or from St. Louis to Quito. *

Mexico has almost no navigable streams, and hence the railway would seem to furnish the instrumentality indispensable to her future development.

The Mexican Southern Company has recently issued \$2,940,000 of preferred stock and \$2,450,000 of common stock to aid in the construction from Puebla to Oaxaca, 249 miles. The present issue is to complete the road from Puebla to Tecomavaca, 139 miles. It is said that the surveys are complete to this point. The grading is complete from Puebla about 90 miles, and a very large force is now at work. The entire line is to be completed in two years. It will connect with the Interoceanic and the Mexican Central at Puebla, and will have a gauge of 3 feet.

The following is given in the Engineering News of January 11, 1890:

Salvador Malo, of the City of Mexico, has taken over the concession known as the Fenelon concession for a railroad from Oaxaca to Tehuantepec.

CONTINENTAL RAILWAY.

A concession was granted November 15, 1889, to Feliciano San Roman for the construction of a railway from Matamoras to Tuxpan, thence one branch to the city of Mexico, and another to connect with the National Railroad of Tehuantepec, from which connection one branch is to be built to any port in Yucatan and another branch to the boundary line of Guatemala. Construction is to commence in two years and the line is to be completed in twenty years. The Government grants a subsidy of \$18,000 per kilometer in 5 per cent. bonds and gives the company all mineral lands and marble quarries along the right of way.

Some years ago a concession was granted to Count Telfener for a railway called the New York, Texas and Mexican Railroad to be built from Matamoras through Tampico and Tuxpan to the City of Mexico. This concession was forfeited, but a renewal of it has recently been secured by General Treviño.

MEXICAN RAILWAY.

Vera Cruz to City of Mexico 264 miles. In 1837, the first Government decree was issued granting a concession for the building of this railroad, but the projector was unable to construct any portion of it and the grant was declared forfeited. The first real work was begun in 1857, when Don Antonio Escandron secured the right to construct a line from the Gulf of Mexico to the Pacific. This concession was transferred

* Others: 'Travels in Mexico.'

in 1865, and work was begun at either end; after many delays trains commenced running between Orizaba and Vera Cruz September 5, 1872, and on January 1, 1873, the entire line was completed. Its success led to seeking connection with the United States and many concessions for such lines were granted by the Government with subsidies of about \$8,000 per kilometer. Most of these have been merged into the greater lines.

Senor Romero has said:

As a test of the capabilities of this road, let us make a comparison between the earnings of the Vera Cruz Railroad and roads similarly situated in the United States. Probably the two lines combining more nearly than any others similar conditions are the Union Pacific and the Central Pacific, having heavy mountain grades, long stretches of high table lands, and sea-coast connections. An examination of the official report shows that in 1889 the gross earnings per mile of these three roads were, Union Pacific, \$11,304; Central Pacific, \$7,818; Vera Cruz, \$12,662. The net earnings per mile were as follows: Union Pacific, \$6,163; Central Pacific, \$3,913; Vera Cruz, \$7,330. The reports for 1895 show as follows: Gross earnings Union Pacific, \$12,516; Central Pacific, \$8,758; Vera Cruz, \$16,459. Net earnings: Union Pacific, \$6,207; Central Pacific, \$3,758; Vera Cruz, \$10,098. It will thus be seen that for the last year, the Vera Cruz road made a net earning of 6 per cent. upon a capital of \$168,000 per mile. A very liberal estimate would not place the cost of construction to-day at more than \$50,000 per mile, upon which the present net earnings would be a return of about 20 per cent.

This line has a branch from Apizaco to Puebla, 29 miles in length, and operates the Jalapa Branch Railway from Vera Cruz to Jalapa, 70.75 miles.

THE INTEROCEANIC RAILWAY OF ACAPULCO AND VERA CRUZ.

This road was registered April 30, 1888, and projected to run from Acapulco, on the Pacific Ocean, to Vera Cruz, on the Atlantic, passing through the cities of Morelos, Yauhtepec, Amacusac, Mexico, Irolo, Calpulalpam, San Martin, Vireyes, Perote, and Jalapa; with branches from Vireyes to San Juan de los Llanos, from San Lorenzo to San Nicholas, and from Yauhtepec to Cuernavaca. For fifteen years the company may import, free of all duties, federal and local, material for construction, operation, and rolling-stock. The company is obliged to build at least 50 kilometers of track each year (beginning July 1, 1887), over and above the 467 kilometers (289.5 miles) already built, as follows: Mexico to San Martin, via Irolo, 123.6 kilometers (76.6 miles); San Martin to Puebla, acquired by the coal company, 37 kilometers (22.9 miles); Puebla to Jalapa, via Vireyes and Perote, 89.7 kilometers (55.6 miles); Vera Cruz to Jalapa, 25 kilometers (15.5 miles); Mexico to Yauhtepec, 158.3 kilometers (94.4 miles); total, 268.6 miles. Branches: San Lorenzo to San Nicholas, 22.3 kilometers (13.8 miles); Vireyes to San Juan de los Llanos, 11.3 kilometers (7 miles); total branches, 33.6 kilometers (20.8 miles); total of all lines 289.5 miles. The company must finish said lines within the maximum term of twelve years, counting from July 1, 1887. The company has purchased the Puebla and San Marcos, running from Puebla to San Marcos, on the Mexican Railway, 35.4 miles, and has under construction a connection from La Luz to Vireyes, on the Puebla road. Control was also acquired in 1884 of the Mexican Carboniferous Railroad, projected from Puebla south to the coal fields; and in 1886 the Mexican Government sold to this company the Puebla and San Martin Texmelucan Railway from Puebla to San Martin, 15 miles, with the stipulation that the road is to be speedily completed—the gauge is 3 feet and rail steel, 40 pounds.

An idea of the construction of this road in a difficult part is given in the following quotation:

From Ozumba the descent begins. Its steepest portion is in the next 10 miles, where the lines twist backward and forward along the sharp declivity in order to obtain a sufficiently easy grade. At several points in this curving descent three lines of track at different elevations lie close together. From Nepantla the road is much less steep, but all the way to Cuantla the road is down hill. Beyond, the road continues through the cane country to Yauhtepec.

This line is complete from Mexico City to Perote, 160 miles, and the Morelos line has been completed to Tlalizapan.

From a point 25 miles south of Cuernavaca this line will run entirely within Guerrero, a State possessing immense mineral wealth almost totally undeveloped.

The Interoceanic Railway, a narrow-gauge road from Vera Cruz to the City of Mexico and thence to Acapulco, has been in contemplation for several years, but the necessary capital to carry it through has been wanting. At one time a French company was formed, but it failed to accomplish anything. Finally English capital was induced to take hold of the enterprise. After a survey of the route by civil engineers, sent out for the purpose, a company was organized with a capital of £3,500,000 sterling. That was over a year ago. It has been actively at work about nine months. From a civil engineer connected with the company I learn the following facts:

The work done thus far has been on the Vera Cruz division, which, it is expected, will be finished and in active operation in about a year. A new contract has been made by the company with the Mexican authorities for the Acapulco division, of the terms of which I am not advised. There are now at work on the division being built about six thousand men. The line is complete from the City of Mexico to Perote, 160 miles. That from Perote to Vera Cruz, 133 miles, is under construction.

On the Acapulco division there are 95 miles of railway in operation, from the City of Mexico to Yantepec, which was purchased by the Interoceanic Company. In this connection I would remark that the Interoceanic Company has purchased two other lines on the Vera Cruz division—the road from Puebla to San Juan, 90 miles, and from Vera Cruz* to Irolo, 40 miles.

The distance from Acapulco to the City of Mexico, in a straight line, this engineer informs me, is about 285 miles; as the road will probably be run it will reach 386 miles. The route has not been as yet defined or determined. It may not be run direct to the City of Mexico, but make a divergence at or near Chilpanzingo and connect with the Vera Cruz line at Puebla. While this will not materially lengthen the distance to the City of Mexico, the change will shorten the route from Acapulco to Vera Cruz.

The most difficult portion of the work is between Acapulco and Chilpanzingo, a distance of 108 miles. The route is hilly and mountainous, the hills running transversely across the route, thus rendering the engineering laborious and costly. The character of these elevations can be conjectured from the fact that Chilpanzingo is between 5,000 and 6,000 feet above the level of the sea.

The most important fact connected with this brief summary is the certain construction of this important railroad, which will be of immense benefit in the development of this portion of Mexico and to its commerce. It will open, besides, a new and brilliant future to Acapulco, utilizing its splendid harbor and opening to its people new and varied industries. On the completion of this work depends the future of the town and the development of this section. (Report by Consul Loughery, Acapulco, August 22, 1889.)

RAILROAD FRANCHISE IN MEXICO.

Mention has already been made of a railroad concession having been granted on December 5, 1887, for a line to commence at the port of Mazatlan (consular district of Mazatlan), State of Sinaloa, to extend to the northwest, nearly parallel with the coast line of the Gulf of California into Sonora, to connect with the Sonora Railway at some convenient point north of Guaymas. This franchise or contract was not formally confirmed by the President of the Mexican Republic until February 23 of this year, and is a modification of the franchise or contract of the Sinaloa and Durango line which was signed on July 5, 1886.

It is proposed that this line shall pass through Culiacan, the State capital of Sinaloa, into Sonora, touching at Alamos, and, as before stated, connecting with the Sonora Railway.

The contract also includes a road from Culiacan or Mazatlan to some point in the State of Durango, with right to continue the line through the State of Coahuila to the Rio Grande, and to construct branches from either side of the lines, each branch not to exceed 62.14 statute miles in length, the said branches to be designated to the executive within five years from date of signature of the franchise.

From the port of Altata to the city of Culiacan a railway 35 miles in length is in operation. This piece of road was constructed under a concession granted to the government of the State of Sinaloa on the 15th August, 1880. The time allowed for commencement and completion of the surveys and construction of the line is the same as that stipulated by the concession of July 5, 1886, but extended so as to count from February 23 of this year.

* Probably the City of Mexico.—G. A. Z.

The concession confers right to construct and operate docks, wharves, warehouses, telegraphs, etc., as is usual in such contracts.

The road is to be standard gauge, the maximum of grades to be 4 per cent. and the minimum radius of curves to be 325 feet. The weight of rails to be 60 pounds to the yard.

The company formed to carry out this contract can issue bonds at not less than \$15,000 nor more than \$25,000 per kilometer, and can mortgage the line at a rate not to exceed \$150,000 per kilometer. The subsidy given by the Government is to be \$8,000 per kilometer (equal to \$12,874 a statute mile), in bonds denominated "railway subsidy bonds," bearing 6 per cent. interest, payable by the Treasury every six months.

At the end of ninety-nine years the road and all its equipments is to become the property of the Government.

Referring to a franchise granted by the Mexican Government in November of last year, mentioned in my general report of that year, for the construction of a line of a railroad from Guaymas to Alamos, 240 miles distant, a reconnaissance of the route has been made, but no work of construction has yet been commenced, nor has any material arrived. (Report by A. Willard, U. S. consul, Guaymas, Mexico, March 19, 1888.)

THE TEXAS, TOPOLOBAMPO AND PACIFIC RAILROAD

(American and Mexican Pacific Railway) was projected, of standard gauge, to run from Eagle Pass to Topolobampo, with branches to Presidio del Norte, Alamos in Sonora, and the port of Mazatlan. The concession was granted June 22, 1880, with a subsidy of \$18,050 per mile. The company was organized in March, 1881, under the name of the Texas, Topolobampo and Pacific Railroad Company, but in 1883 the name was changed to the American and Mexican Pacific Railway Company. The total length of the line was to be about 1,500 miles, of which 93 miles are surveyed and 35 miles graded from the harbor to the Rio Fuerte. This route was to be the shortest trans-continental line to Australia and Asia that could be laid down on the map. It claimed to have at Topolobampo, within the Gulf of Mexico, one of the few fine harbors of the Pacific coast. These harbors are spaced at wide intervals. That at the Columbia River is the highest up, then 600 miles south is San Francisco, 441 miles below this is San Diego, 650 miles farther on in a direct line, or 936 doubling Cape St. Lucas, is Topolobampo, and 740 miles south of this again is Acapulco. Between them there is nothing that can be called a harbor.

The concession granted to the Texas, Topolobampo and Pacific Railway Company has been officially declared forfeited. The concession was originally granted in June, 1881, and modified afterwards in a manner favorable to the company, the company being obliged within a year from the final modification in 1888 to build at least 50 kilometers of road, which was not done. The company loses the forfeit money, amounting to \$90,000. (Telegram, City of Mexico, January 6, 1890.)

TEHUANTEPEC RAILWAY.

In 1841 the Mexican Government granted a concession to Don José de Garay to make a connection between the two oceans, providing that the grantee should make a survey, at his own expense, of the ground and the direction which the route should follow, and also of the ports which might be decreed most convenient from their proximity. A survey was duly made and the reports were published. The route was not necessarily to be a canal, although Señor Moro, the engineer, based his operations upon this assumption.

Soon after the termination of the war with the United States, the franchise of Señor de Garay became the property of Mr. P. A. Hargous, of New York, who, in connection with a company organized in New Orleans, assumed the rights and responsibilities of the Garay grant. After negotiations with the Mexican Government, and unavoidable delays, it was agreed that a railroad would be more practicable than a canal. Accordingly a survey for a railway across the isthmus was made in 1851, under the direction of the late General J. G. Barnard, of the U. S. Army, who was detailed for that purpose. The surveys demonstrated that a railway would be feasible at a moderate expense, that the grades did not exceed 60 feet per mile except at the

Chivela Pass, where they were 116 feet per mile for the distance of 8 miles, and that the summit was 720 feet above the sea level. In 1857 the railroad project was resumed and a new survey was executed under the direction of Col. W. H. Sidell, U. S. Army, but owing to various reasons this line was never constructed.

In 1870, the Tehuantepec Railway Company was formed in New York. Mr. Simon Stevens became its president, with the late Hon. Marshall Roberts as promoter. New surveys and exploration were made, but the road was not built under this administration. Upon a reorganization of the company, with Mr. Edward Larned, of Pittsfield, Mass., as president, and under a charter from the State of Massachusetts, a modified concession was obtained from the Mexican Government on June 2, 1879, to build the Tehuantepec Railroad. A subsidy of \$7,500 per kilometer was included in the concession. The track was not to exceed 200 kilometers (124 miles) in length.

Under Mr. Larned's management only 5 kilometers were constructed and the concession was declared forfeited for non-compliance with its conditions.

In 1882 the Mexican Government made a contract with private individuals for the completion of the Tehuantepec line, and in January, 1883, the track was finished from the mouth of the Coatzacoalcos River to Minatitlan, a distance of 25 miles. The route of the projected railway is about 170 miles in length.

The line runs due north and south, and will traverse the southern portions of the States of Vera Cruz and Oaxaca. The adjacent country may be described as follows:

The depth of the water at low tide is 13 feet on the bar at the mouth of the Coatzacoalcos River, which is navigable for a distance of 30 miles. Placer gold deposits are said to exist in the interior of the isthmus, although the country has not been yet geologically explored. Large beds of asphalt also occur. The vegetable productions of this region are indigo, tobacco, sugar-cane, cocoa, cotton, coffee, Indian corn, vanilla, sarsaparilla, ginger, and India rubber. The terminus of the road will be at Salina Cruz, 3 miles west of La Ventosa, on the Pacific coast, which is considered a safe harbor.

A telegram from the City of Mexico dated February 12 says that work on this road is making good progress, with over 2,000 men employed. Up to date 47 kilometers (29 miles) are completed from Coatzacoalcos on the Gulf and 80 kilometers (49.6 miles) on the Salina Cruz or Pacific end. The great provisional bridge, 1,250 feet long, over the Tehuantepec River is finished. It will eventually be replaced by a more solid structure.

Cardenas Railway.—From Villa de Cardenas to El Ingenio, on the left bank of the Grijalva River, in the State of Tabasco. Completed 4 miles.

A company has secured a subscription of \$2,500,000 in London to its first preference stock to build a line from Tonala to a point on the Grijalva River, thus making an interoceanic line. Surveys are now being made westward on the Pacific Coast from Tonala; a portion of the line to the eastward has already been located.

Ferro Carril de Hidalgo, from Irolo to Pachuca, 37 miles with branches from Teoloyucan to Tizayucan, 15 miles, and from Tepa to Santa Maria, 9 miles, total 61 miles and siding 2 miles. Gauge 3 feet.

Ferro Carril de Monterey y Golfo, projected from Monterey to Tampico, about 400 miles, 25 miles opened April 24, 1889, 100 miles to be completed July 1, 1889, the remainder to be built as rapidly as possible. A recent report says that track is laid 78.2 miles southeast of Monterey, and the branch line running northwesterly to Venadito is being completed at the rate of 2 miles a day.

Ferro Carril Nacional de Tehuacan a Esperanza.—Chartered September, 1877. Construction begun July 1, 1878, completed and opened January, 1880. This road was built chiefly to carry the products of the country through which it passes. It is worked by mule power, the use of locomotives being very expensive and considered impracticable. Length of line 31 miles. Gauge 4 feet 8½ inches. Total cost of road \$350,000. Operating cost 65 per cent. of gross earnings. A concession has been granted to extend it 49.6 miles south of Esperanza.

Matamoros and Matehuala.—It is stated that this road will soon be under construction. It is to run from Tamaulipas via Villa de Mendez, Cruilla, Burgos, San Nicolas, Villagran, Hidalgo, Victoria, Linares, to Matehuala. The country through which it passes is rich in minerals and timber and is capable of producing large crops of cotton, sugar and tropical fruits.

Sinaloa and Durango Railway.—A concession was granted to Mr. Robert R. Symon and associates for the construction of a railway from the Port of Altata to Durango via Culiacan and Casala, with a branch to run down the coast from Culiacan (population 10,000) to Mazatlan.

This road is completed to Culiacan, 38.5 miles. The company's charter was amended in 1888, authorizing the construction of a road from Mazatlan to Guaymas, and promising a subsidy of \$8,000 per kilometer, payable in 6 per cent. bonds. The cost of the completed portion was \$1,102,269, of the equipment, \$54,577.

Michoacan and Pacific.—This road was opened for traffic from Maravatio to Angango, 27.9 miles, on January 1, 1890, and will be opened to Las Trojes, 3 miles further, by March 1. The construction is to be continued towards Ignala.

Nautla and San Marcos Railway.—Authorized from bar of Nautla, on the gulf between Vera Cruz and Tuxpan to San Marcos, on the Mexican Railway, 111 miles. Four miles have been completed of standard gauge. The concession, dated June 25, 1881, granted a subsidy of \$9,660 per mile.

Puebla and Izucar de Matamoros Railroad.—From Puebla to Izucar, 37 miles, of narrow-gauge. The concession, dated May 6, 1878, granted a subsidy of \$12,880 per mile, or \$480,000 in all.

Vera Cruz, Anton Lizardo and Alvarado Railway.—From Vera Cruz to Alvarado, 34 miles. The concession granted March 26, 1878, carried a subsidy of \$12,880 per mile; an extension having been authorized from the San Juan River to the Isthmus of Tehuantepec, 84 miles, makes this amount to \$1,520,000 in all.

The following concessions are said to have been granted and are likely to be carried out, either wholly or in part:

(1) For a road from Deming, N. Mex., southward via Asuncion, Corralitos, Casas Grandes, El Valle, and Santa Ana to Guerrero, east to Chihuahua and west to Guaymas Bay and Topolobampo. Surveys are being made along the route.

(2) For a line from Matamoros to San Luis Potosi, to be of standard gauge and with a subvention of \$8,000 per kilo.

(3) From Matamoros to Bagdad.

(4) To Gonzales Esteva for a line from Chamela, on the Pacific, to Aguas Caliente, and Guadaluajara. The States of Jalisco and Aguas Calientes have granted subsidies of \$2,000 and \$3,000 per mile, respectively.

(5) To General Felipe Camacho for a line from Tula via Pachuca and Enlancingo to Zacualtipan with authority to extend the line to Tampico or Tuxpan. The surveys are to begin at once, the construction within a year, and the line is to be completed within four years. A subsidy of \$9,000 per mile was given. Work has already begun and about 14 miles are nearly completed.

General Palmer, president of the National road, says that the introduction of railroads has increased the revenues of the Government from eighteen to thirty-one millions a year. It is clear that railroads are going to have a profitable corner here, but it will have to be on a reasonable business basis. When the railroad people conclude to reckon their subsidies as uncertain, for the present at least, and to count simply on the earning capacity of their property, they will be on a solid basis and in time a profitable one, too.

The expenses of railroading in this hot climate are great. Wooden ties have but a short life, cracking in the dry season and rotting during the rainy months; bridge timber and piles also wear out rapidly. Freight cars must be painted frequently to prevent drying and cracking, and even the substantial Pullman cars shrink under this exposure. Fuel constitutes a large item of outlay. Mesquit roots are burned on the Central road, pine cut along its route is used on the Interoceanic, and the Vera Cruz Company feed their engines coal blocks brought from Wales as ballast. The decay of ties will in time necessitate a serious outlay on the Central road, for wooden

sleepers cost here \$1 each. It is evident that iron ties are a necessity in Mexico, and they are just coming into use. The climate tends to preserve the rails and iron bridges, provided the latter escape the torrents of the rainy season. The grades on the railroads are somewhat heroic, and the task of constructing road beds in this mountainous region is often gigantic.*

RAILROADS IN YUCATAN.

Ferrocarril de Merida á Progreso, from Merida to Progreso, 24 miles. Federal subsidy, \$9,660 per mile. Total cost, \$800,000. Construction begun, July, 1873. The road was opened September 12, 1882. Gauge, 4 feet 9 inches. Soluta branch from Merida to Soluta, 30 miles.

Ferrocarril de Merida á Peto, from Merida to Tiscal, 43.4 miles projected to Peto, 100 miles in all. Concession was granted by the federal government to the governor of Yucatan March 27, 1878. After 2.5 miles had been built it was transferred to R. and O. G. Canton. The completed portion was opened May 5, 1885. It has a subsidy of \$8,344 per mile. Gauge, 3 feet.

Ferrocarril de Merida á Calkini, from Merida to Chochola, 21 miles; projected to Calkini, 102 miles. Completed portion opened August 2, 1884; the remainder is under construction. Concession dated September 14, 1880, with subsidy of \$8,344 per mile. Gauge, 3 feet.

Ferrocarril de Campeche á Calkini, projected from Campeche to Calkini, 52 miles. Completed branches from Campeche to Pomuch, 39 miles, and from Campeche to Lerma, 6 miles. The main line is under construction. Gauge, 3 feet. Concession is dated February 23, 1881, and gives a subsidy of \$9,660 per mile. Sole owner, José Mendez Estrada, who issued to the State of Campeche fifty shares of stock of \$1,000 each in consideration of the concession.

Ferrocarril de Merida á Valladolid, projected from Merida to Valladolid, 106 miles, of which 22 miles from Merida to Motul City, were completed and opened July 22, 1888, the remainder is under construction branch from Conkal to Progreso, 19 miles, completed. Another branch is projected from Cenotilla to Tizimin, 37.7 miles. Gauge, 3 feet. Concession dated December 15, 1880, with a subsidy of \$8,344 per mile.

The following concessions have been granted:

(1) For a line from Cancel to Progreso, without a money subsidy, the road to be finished in five years.

(2) For a line from Izamal to Chan Santa Cruz. An extension to be built from Tekanto to Izamal.

One of the best built railroads in Yucatan is that owned by the brothers Rudolfo and Olegario G. Canton, and named the Merida and Peto Railroad, and, as it may be considered a typical road of Yucatan, a general description of it may be of use.

Its concession was consummated May 27, 1878, and the first rail laid a year later. The road is of 3 feet gauge, well built, and ballasted for the most part. The rails are of Bessemer steel (purchased in England), weighing 40 pounds to the yard, and resting upon sleepers of "Chu cum," a very hard wood, as hard and heavy as lignum vitæ. These ties, or sleepers, are placed 2 feet apart, fifteen to the rail length. The locomotives are four in number, all purchased in the United States. Five passenger-cars are now in use. Twenty-two box and platform cars carry the bulk of the traffic.

Upon the line of the 68 kilometers (42 miles) now in actual operation there are eight suitable and thrifty looking stations, built of stone and mortar, well cared for, and very neat in appearance.

The cost of constructing a road-bed in Yucatan is materially lessened by the level land surface. I know of but one natural depression necessitating a fill of over 25 feet upon any of the five railroads in Yucatan. The rocky plane that for the most part covers the populated portion of Yucatan is of recent formation, being of soft, calcareous rock, and in traversing it the road builders sometimes find themselves literally breaking through, the percolating waters and other causes combining to form caves or "cenotes" of varying magnitude, and covered with a crust of various degrees of thickness and strength.

The above-described Merida and Peto Railroad has just had to grapple with and

* "Mexico of To-day," by S. B. Griffln, 1888.

overcome a difficulty of this nature. While cutting the road through a small hill near the station of Hunabchen a blast suddenly opened the mouth of a gulf beneath, which luckily proved to be comparatively small and shallow, and with much labor was filled sufficiently to allow the work to proceed.

I have collated the following data concerning the railroads of Yucatan. The amount expended can, of course, be considered as only approximately correct. Various reasons make it an impossibility to obtain the exact figures in dollars and cents.* (Report by Edward H. Thompson, U. S. Consul, Merida, Yucatan, February 15, 1888.)

THE COAL-MEASURES OF COAHUILA.

As the Republic of Mexico is generally regarded as barren in coal-measures of commercial worth, a statement of what has actually been accomplished in the past three years in proving the existence of extensive coal areas and in their development in a portion of the state of Coahuila will be of value.

The region of country bordering the Rio Grande River, from above Eagle Pass to below Laredo, Tex., and extending westerly and southerly over 100 miles in the State of Coahuila, belongs geologically to the cretaceous period. In the Rio Grande region the coal-measures, as seen in the hills around Eagle Pass, Tex., and at Laredo, belong to the "Fox Hills group" in the classification of geologists.

This Rio Grande coal belongs to the class of cannel or semi-cannel coals. Cannel coals are valuable for household and general use as fuel, either for heat or steam production, and also for the manufacture of gas or the distillation of oil, but are valueless for manufacture of coke.

The Sabinas coal, as the Coahuila coal is called, on the other hand, is a highly bituminous coal, yielding by analysis from 60 to 70 per cent. carbon, and produces an excellent grade of coke admirably adapted to all smelting purposes, whether of iron or the ores of the precious metals.

The extent of the coal areas in the State of Coahuila is not yet definitely determined, and hence this report will be limited to a general description of the coal areas that have been explored and are now being actually developed by the companies representing American capital, the Coahuila Coal Company and the Alamo Coal Company. These companies jointly own about 51 square leagues of territory, or about 220,646 English acres. This immense area is traversed by the track of the Mexican International Railway, and embraces a large portion of the valleys of the Sabinas and Salado Rivers.

Sabinas station, on the Mexican International, is 73 miles from the Rio Grande River at Piedras Negras, and has an altitude above sea-level of 1,116 feet.

From Sabinas there is a standard-gauge railroad 13 miles to the coal mines at San Felipe and Hondo, where the coal companies have their main works. Here are offices, store-houses, miners' quarters, mining machinery, and all appliances for mining and shipping coal in large quantities. Explorations over this large area by prospecting shafts and the diamond drill have conclusively demonstrated that two, and perhaps three, coal horizons underlie this territory. The uppermost in the geological series of these coal formations is known as the "Laramie group," and the one that belongs immediately beneath it is the Fox Hills group.

The Laramie and Fox Hills groups are well-known coal-bearing formations in Colorado, Utah, and Wyoming.

In Coahuila coal formations the same conditions are found to exist as in all other western coal formations.

The entire region appears to have been disturbed by some convulsion of nature, so much so that the coal horizons, instead of lying in horizontal planes, can be more accurately compared to an undulating inclined plane. The disturbing cause or force seems to have been exerted along a path from south-southwest to north-northeast, leaving the ridges and depressions running nearly west-northwest and east-southeast, and hence at many points the strata have been greatly disturbed and broken up and faults occur in the continuity of the coal-bed.

At some points the strata are nearly horizontal and in close proximity; have changed to an inclination of from 30 degrees to 40 degrees. Other peculiarities of the formation were caused, probably, by forces at work simultaneously with the deposition of the coal material. The district was doubtless acted upon by swift currents of water that washed away portions of the vegetable material (basis of future coal) and clays were deposited in its stead.

Subsequently other coal material was deposited over the clays, and clays in process of time changed to argillaceous shales. These shales, representing what coal miners call a "horse," where no subsequent deposit of coal material was laid down, only a thin scale of coal will be found. Hence coal mining in the western coal

* The table has not been copied.—G. A. Z.

formations in Utah, Colorado, and Wyoming, in the United States, and here in Coahuila, is subject to about the same conditions, viz., varying thickness of the coal-beds, even within short distances, and to greater or less variation in the quality of the coal within equally circumscribed limits. The variation in thickness may extend even to an entire absence of coal from certain portions of the bed, and variation in quality may range from fine coal to merely carbonaceous shale. These varying conditions in thickness and quality necessitate careful explorations with the diamond prospecting drill. This has been very exhaustively performed over large areas by the coal companies established at San Felipe and Hondo.

The Laramie strata can be traced along the north side of the Sabinas Valley, a distance of nearly 40 miles, beginning a few miles above Sabinas station of the Mexican International Railroad and extending southward down the valley.

On the south side of the River Sabinas, some 20 miles from Sabinas station, coal croppings are found in strata equivalent to the Fox Hills group.

As coal of either the Laramie or Fox Hills age, or both, is well known to exist in Colorado and New Mexico along the eastern slopes of the mountains, it is evident that there is a belt of these two coal-bearing formations extending nearly or quite continuously from the valley of the South Platte in Colorado to the State of Nuevo Leon, Mexico. The coal at Sabinas is the only coal found anywhere in northern Mexico suitable for iron smelting and kindred metallurgical processes.

At many points on the Sabinas River thick beds of argillaceous shales occur, mixed with alternate layers of iron-stone. This iron-stone, it is believed, will some day prove of immense value for manufacture of pig-iron.

The argillaceous iron-stone of the Sabinas region, the mountains of magnetic iron ore in the neighborhood of Monclova, and the limestone found all over the country, in connection with the Sabinas coal and coke, comprise all the materials and requisites for the manufacture of iron.

The extension of the Mexican International Railroad to Durango will bring Sabinas coal and coke to the famous iron mountain of Durango.

When one considers that save at the Sabinas coal mines no coal is anywhere mined in all the territory of Mexico, and bearing in mind, too, the equally important fact that Sabinas coal produces a fine grade of coke, the immense value of these coal mines, now producing over 8,000 tons of coal per month, to Mexico is apparent. This coal is sold to the Mexican International and Mexican Central Railways, shipped to the City of Mexico, and about 3,000 tons monthly is exported to the United States at Piedras Negras for the Southern Pacific Railway.

The development of iron manufacture, that is, producing pig-iron from iron ores, and of the thousand attendant industries, will be of incalculable benefit to Mexico, as at present Mexico purchases all her iron and iron manufactures.

It is quite possible that the full development of the iron industries of Mexico, now for the first time made possible, or even probable, by the demonstrated fact that coal yielding an excellent coke exists in inexhaustible quantity in the Sabinas region, will prove of greater value to Mexico, will contribute more to the real comfort and well-being of her people, and add more to the real greatness and wealth of the Mexican nation than have her immense resources in the precious metals.

So to-day in the United States the united industries of coal and iron add more to the national wealth, strength, and prosperity than does the total yield, immense as it is, of our mines of the precious metals. (Report by Eugene O. Fechét, U. S. consul, Piedras Negras, December 6, 1889.)

CENTRAL AMERICA.

The present independent Republics of Guatemala, San Salvador, Honduras, Nicaragua, and Costa Rica constitute what is known as Central America—a territory extending between $8^{\circ} 10'$ and $19^{\circ} 20'$ north latitude, and between $82^{\circ} 25'$ and $92^{\circ} 30'$ west longitude. In length it measures between 800 and 900 miles, while its breadth varies from 30 to 300 miles. No competent survey has ever been made of this country, and even the coast line is not always correctly laid down on the best charts. Maps have been made at haphazard in most cases, and very few positions have been successfully determined. Government surveys along the lines of proposed canals or railways have not extended beyond a narrow line, usually in low regions remote from important centers. Dr. Franzius has published a very excellent map of Costa Rica; but most of the so-called maps published by or under the authority of individual republics are of no scientific value, the course of the principal rivers and the direction of the main mountain chains being unknown. To illustrate the uncertain geography of Central America, let me give the extent and population, as published by three authorities: I. Lippincott's *Gazetteer*; II. Whittaker's *Almanac*, and III. the "*Geografía de Centro América*" of Dr. Gonzalez:

States.	I.		II.		III.	
	Square miles.	Popula- tion.	Square miles.	Popula- tion.	Square miles.	Popula- tion.
Guatemala.....	40, 777	1, 190, 754	40, 776	1, 500, 000	50, 600	1, 200, 000
Salvador.....	7, 355	434, 520	7, 335	554, 000	9, 600	600, 000
Honduras.....	47, 090	351, 700	39, 600	300, 000	40, 000	400, 000
Nicaragua.....	58, 000	263, 000	58, 170	300, 000	40, 000	275, 816
Costa Rica.....	21, 495	180, 000	26, 040	200, 000	21, 000	200, 000
	174, 697	2, 392, 974	171, 921	2, 854, 000	161, 200	2, 675, 816

Without surveys and without a proper census of the Indian tribes no scientific description of the country can be given. Humboldt's theory of an Andean cordillera has been disputed, and his mountain chain has proved to be a confusing (but not confused) series of mountain chains.

* * * * *

Whatever has been the process by which this essentially mountainous country has been formed, we have at present at its northern boundary the high plain of Anahuac, extending from Mexico (where it is interrupted by the Isthmus of Tehauantepec) through Guatemala; of somewhat lower level in Honduras and Salvador, sinking to almost sea level in Nicaragua (154 feet); and rising again in the Altos of Veragua to about 3,250 feet. This main range has its axis much nearer the Pacific shore and almost parallel to it, being in Salvador, distant 75 miles, and in Guatemala (Totonicapan), only 50. Towards the Pacific the slope is steep, interrupted by many volcanoes; while on the Atlantic side the gently terraced incline is broken into subsidiary ridges extending to the very shores. In the oceanic valleys and along the coast are the only lowlands of Central America.*

Among the important rivers of Central America are the Usumacinta, which flows into the Gulf of Mexico, and is navigable many miles through a singularly fertile country. The swift Chixos, the Rio de la Pasion, and the almost unknown San Pedro, unite to form this "child of many waters."

* "*Gautemala*," by W. T. Brigham, 1887.

The Rio Polochic and Motagua in Guatemala, the Segovia, Rio Grande, San Juan, etc., flow into the Caribbean Sea. Those flowing into the Pacific are short in length, except perhaps the Lempa in Salvador.

Of the lakes, the most important are Nicaragua and Managua, Izabal and Peten, 500 feet above sea-level, Atitlan (5,110 feet), Amatitlan (3,890 feet), Cartina, Laguna de la Cuba, and Lago de Guija.

The country in general is divided into three zones: the hot, the temperate, and the cold. The *first* is along the coast, extending to about 3,000 feet in height; the *temperate*, that of all the plateaus between 3,000 and 6,000 feet, contains the greater portion of the population; and the *cold*, above the latter height.

The seasons are two: the wet extending from May to November, and the dry during the remainder of the year. The range of temperature throughout the year is not over 17 degrees. On the Pacific side there is less rain than on the Atlantic, but the streams become torrents everywhere during the rainy season. The climate, except along the coast, is healthful, and the soil is rich in all tropical productions. The precious metals are found in abundance and many other ores occur. All our sugar, coffee, chocolate, rice, India rubber, etc., should come from Central America.

GUATEMALA.

The largest part of Guatemala consists of an elevated table-land, a continuation of the plateau of Yucatan, and whose mean altitude is about 5,000 feet. The climate of the elevated region is very agreeable; along the coast it is hot and moist.

This State is very rich in resources, which as yet have been little developed; gold, silver, coal, iron, lead, and marble are found. There are upwards of one hundred kinds of timber trees. Other products are coffee, cochineal, maize, frijoles, rice, wheat, indigo, cocoa, sarsaparilla, tobacco, sugar, vanilla, chile, and many fruits.

The rain-fall on the coast is about 150 inches during the rainy season.

Santo Tomas is one of the best ports of Central America, affording anchorage close to shore for large ships.

An excellent idea of the topography of this country can be obtained from the map in the report of the French expedition of 1868. The table-land is intersected by deep valleys running in various directions.

The greater population is on the table-land, because the coast is so unhealthy. The entire population is about 1,400,000, of which 59,039 are in the city of Guatemala, 20,000 in Antigua, 25,000 in Quezaltenango, etc.

Guatemala has a good system of roads; stages ply between Guatemala City, Antigua, and Quezaltenango, but travel across the country from east to west must be carried on by saddle.

The coal, which is bituminous and very rich, is found in the department of Izabal.

RAILWAYS.

Champerico and Northern, from Champerico to Retalhuleu, 27 miles, opened July, 1883, projected to San Felipe, 16 miles farther. It has recently been purchased by native capitalists. The total amount of coffee moved by this road in the year ending June 30, 1887, was 16,873 tons. The imports carried were 3,015 tons. In volume 27, Consular Reports, United States, page 262, will be found a complete description of this road. The gauge is 3 feet, with maximum grades of 3 per cent. and minimum curvature of 4 degrees.

Ferro-carril del Norte de Guatemala, projected from Puerto Barrios to Guatemala City, 185 miles; 4 miles were constructed from Santo Tomas in 1883. The Guatemalan Government has recently entered into a contract with M. Henri Louis Felix Cottu for a loan of \$21,312,500, for the construction of a railway from Guatemala City to Santo Tomas, about 185 miles, and agreement on the part of Mr. Cottu to transfer the Guatemala Central Railroad to the Republic of Guatemala. This contract also calls for

the building of a wharf at Santo Tomas; the total cost of road and wharf is fixed at \$10,000,000. Surveys are to be commenced in six months, and the construction in one year. A copy of the contract is issued by the Bureau of Statistics, State Department.

Guatemala Central, from San José to Guatemala City, 71.8 miles. Gauge, 1 meter; maximum grade, $4\frac{1}{2}$ per cent. This line is subsidized by the Guatemalan Government to the extent of \$100,000 per annum for twenty-five years. The completed road was opened in September, 1884. It is thoroughly built and well ballasted. The cross-ties are partly native wood and partly California redwood.

A branch to La Antigua is projected. The total cost of the completed line was \$2,500,000. The highest elevation reached is 5,010 feet.

It is reported that this road has recently been purchased by American capitalists, along with the franchise previously obtained by Mr. Cottu.

Surveys are in progress for a railway to run from Guatemala City to a connection with the Mexican Pacific Railroad at the Mexican border.

The railroad system of Guatemala includes two short lines of track—one of them reaching from San José, the principal Pacific port, to the capital, 72 miles, and the other from Champerico, a few leagues northward, to the coffee plantations of the interior, about 22 miles. Both are useful factors in the development of the country; but more important to the commercial interests of the United States is the proposed line which is intended to connect Port Barrios, on the Caribbean Sea, with the capital and the Pacific, thus shortening the transportation distance from Guatemala to the trade centers of our own country by several thousand miles. This railroad has been contemplated for many years, and a liberal concession was made by the Government to citizens of the United States for its construction; but the grantees after several extensions of their privilege, have finally abandoned the project, and the Government is doing a small amount of work upon it without much encouragement for its completion. Labor is scarce on the Atlantic side of the continent and the climate is very severe; few laborers being able to endure the miasm which constantly arises from the jungles along the coast. Last fall several ship-loads of white and colored laborers were imported from New Orleans to do the grading, but the experiment was disastrous, resulting in a frightful amount of disease and mortality, so that the United States consul-general was obliged to appeal to the Government for a naval vessel to carry the sick back to their homes. But the present engineer-in-chief states that a recent acquisition of negroes experienced in railroad building has been found very efficient and the laborers have very good health. The importance of the line to American commerce leads to the hope that all obstacles to its speedy completion will be removed.

The country along the Atlantic coast is rich in tropical vegetation, and would be rapidly developed if means of transportation were afforded; but the difficulties already encountered make the outlook somewhat discouraging.

The railroad from San José to Guatemala City has been in progress of construction for five years; the concession being originally granted to a native by whom it was transferred to General Butterfield, of New York. The latter completed the line as far as Escuintla, a town 25 miles from the coast, which has long been the center of a large, thickly settled and finely cultivated area, producing valuable crops of coffee, sugar, cocoa, cotton, and other tropical products. There are 500 miles of wagon-roads reaching Escuintla, and the town has always been a market of great importance.

General Butterfield abandoned the railroad at this point, when its completion was undertaken by a syndicate of capitalists from the Pacific coast, who laid the last rail and opened it to commerce in August, 1884. Although constructed through a mountainous country, with an average grade of 4 per cent., the road will compare well with any narrow-gauge line in the world, and is probably the best in Central America. It is laid with steel rails upon hard-wood ties, many of which were imported; is firmly ballasted, and its many bridges were constructed with regard to permanence and safety. The equipment of the road appears to be amply sufficient, its station-houses are commodious structures built upon modern plans; its management is courteous, liberal, and enterprising, and this institution, most important to the commercial welfare of Guatemala, is in all respects a credit to the Republic and the citizens of California, whose energy and capital carried it through. By giving as low rates of freight as the cost of construction will permit, and by a studious regard for the interests of their shippers the managers of this road have done much to facilitate commerce and cheapen the cost of imported goods.

The other railroad from Champerico to Retalhuleu has brought life in a similar manner to a valuable section of the country, and has very largely increased the productive area of the department through which it runs. This road was also constructed by the citizens of the United States and has proved remunerative to its own-

ers. The port of Champerico has the largest export of coffee in Central America, but the importation at San José is greatly in excess.

It is a plan to extend the Champerico Railroad farther into the interior, and a few years will probably see it done. In this connection it may be stated that the extension of the Mexican system of roads into Central America is by no means a difficult or impracticable scheme. The commission has taken pains to secure the information of the character of the country to be traversed, the difficulties and expenses of construction, the probable result such a road would bring to commerce, and is strongly of the opinion that such an undertaking, even if it were carried as far as the Isthmus of Panama, would result in ultimate benefit, not only to the communities through which it would pass, but to the commercial interests of the United States. (Report of South American Commission, page 182.)

First, we discussed a road from Livingston to Coban, to open the coffee region; and as we were fresh from the very route, we tackled the problem unhesitatingly. The road, we decided, should run up the coast towards Cocali, turn through the forest 6 miles to Chocon, crossing the Chocon River on a single span, then over the smaller Rio Cienega and along the north shore of the Lago de Izabal, then a little to the northward of the Rio Polochic, bridging the Cahabon near the limestone ledges east of Pansa, thence through Telemán, and by nearly the cart-road route to Coban. Perhaps 125 or 130 miles in all, of single track, would result in quadrupling the coffee export of Guatemala. It would then be profitable to raise more of the delicious oranges of Telemán, oranges such as Florida can never raise; the mahogany of the Cienega and Chocon could be marketed; and all Alta Verapaz be a plantation of coffee and fruits. More than this, the road would pay from the first through train. Before us on the west coast was the sugar and cacao region—that land that produces the royal chocolate, which outside barbarians never get, but which might be raised very extensively from Soconusco eastward if a railroad should be built over the level lands from Escuintla to Retalhuleu, and Ocós. A road from Guatemala City through Salamá to Coban would not only open the rich sugar estate of San Geronimo, but connect the capital with the Mexican system, which will probably go to Coban eventually. At Belize the English are trying to build a road inland to Peten to open the log wood and mahogany forests, and they need a road along the coast to open the settlements that now have no outlet save by water. A hundred and forty miles at the outside would connect Belize with Livingston. The roads in Honduras will extend between Trujillo and Puerto Barrios, there connecting with the Northern Railroad of Guatemala. Not one of these projected lines presents any very difficult engineering problems. The financial question is the only obstacle; and with the exception of the first two—both coast roads, and of simple construction—they would not pay for a few years. (Brigham's Guatemala, page 168.)

HONDURAS.*

This is the third Republic of Central America, and its resources are almost wholly undeveloped. The vast plains of Comayagua and Olancho are covered with excellent grass, and pasture large herds of cattle. The forests, which occupy much of the Atlantic coast region and the lower mountain slopes, abound in mahogany, rosewood, cedar, etc. In mineral wealth Honduras easily outranks all her sister Republics. Silver ores are exceedingly abundant, chiefly on the Pacific slopes. Gold washings occur in Olancho, antimony, tin, and zinc have been reported.

Of the cities one of the most important is Tegucigalpa, the capital, in the midst of a plain 3,000 feet above the sea and surrounded by a mining region. Its population is about 12,000. The population of Comayagua is 10,000.

Puerto Cortes has a good port, and the Gulf of Fonseca is an excellent harbor, the finest on the Pacific coast of Central America.

RAILWAYS IN HONDURAS.

A narrow-gauge railway extends from Puerto Cortes to San Pedro Sula, 69 miles, but is operated only to St. Jago, 37 miles, the remaining 32 miles being useless, because of the destruction of an iron bridge over the Chamelicon River. It was originally projected to the Gulf of Fonseca (Amapala), under the name of the *Honduras*

* The land laws of Honduras are given in the Consular Reports of United States, No. 105, page 153.

Railway, and was to be about 200 miles long, with a maximum elevation near the center of 2,850 feet. The present line has a traffic of about \$1,250 a month.

The *Honduras Central* is projected from Truxillo to Jutecalpa, 200 miles, and thence to the Gulf of Fonseca. The concession is owned by a New York syndicate.

In July, 1884, the *Honduras North Coast Railway and Improvement Company* received a concession accompanied by a land grant, estimated at 1,000,000 acres, for a line from Truxillo to Puerto Cortes, about 150 miles, with power to extend to the Guatemala boundary line. The gauge is 3 feet; the construction began July 8, 1885.

The *Truxillo and Roman River Railway* is projected from Truxillo to Roman River, 20 miles, with power to extend up the Arenal Valley.

HONDURAS INTEROCEANIC RAILWAY.

One of the great questions of the time is that of effecting interoceanic communication across the American Isthmus, and thus opening to the world the most important highway for the trade and commerce of all countries. This vast problem has not only occupied the attention of our time, but it has also occupied the attention of the past. King Philip II, of Spain, with all the wealth of the Indies at his command, sought, but failed, to accomplish this great work; and its importance to the world was known and discussed long before that early period.

One of the possibly practical solutions of the great problem is, it seems, about to be undertaken by the construction of a railway across the Republic of Honduras, from Puerto Cortes on the Atlantic to Amapala on the Pacific. An English syndicate during last year obtained a concession to build this interoceanic railroad, and organized in London with the title, capital, conditions, and objects, so succinctly set forth in the following notice published in the *Financial News*, of London:

"*Honduras Railway Company, limited.*—Registered by Johnson, Budd & Johnson, 100 Winchester House, E C. The capital of the company is £8,000,000, divided into 200,000 shares of £12 each, and 72,000 shares of £50 each, which are created to enable effect to be given to clause 3 of the memorandum of association, and into 20,000 of £100, with power to issue any of the 20,000 shares of £100 each, and any new shares upon such terms as to preference or otherwise, as the company in general meeting may direct. The objects for which the company is established are to acquire, complete, construct, maintain, and work a railway or railways across the territory of Honduras, from Puerto Cortes, on the Atlantic, to some point in the Gulf of Fonseca on the Pacific, and all or any modification of those works, and all such railways or other works as may be authorized by any concession or decree of the Republic of Honduras authorizing the execution of any railway, or railways, or public work in the said Republic, and to develop traffic or operations thereon or in connection therewith; to acquire the concession or any interest in the concession for the said railway or railways, or any other concession or concessions for railways or public works in the Republic of Honduras which the company may decide to acquire, and to accept any liability; to offer to the holders of bonds of the Republic of Honduras ordinary shares of the company, fully paid up, in exchange for and against delivery and transfer to the company of such bonds, and also to purchase and otherwise acquire any railways or other works in Honduras which shall at the time of such purchase or acquisition have been wholly or partially constructed; to acquire, complete, construct, maintain, and work any roads or lines of telegraphs, docks, wharves, quays, jetties, warehouses, telegraphs, buildings, or operations of navigation or mining, or other operations authorized or demanded by any such concession or concessions as aforesaid, or which it shall be deemed advantageous or convenient to establish or work in connection with what shall be so authorized or demanded, and generally to do such acts and things, the doing of which shall be within the scope or be deemed calculated to develop the advantages of any such concession or concessions."

This venture had so faltered and wavered and even failed, until the stipulated time had expired, that it engendered a general belief that the concession, like many others, would prove a fiasco. But extension of time was obtained, and the syndicate sent a corps of engineers to make examinations, which are now concluded; and the chief of engineers, Mr. Lee Smith, remained here at the capital until last month arranging with the Government, to his satisfaction, some minor details, and he is now going away, leaving the assurance that the road will be completed within three years.

What a pity this great work will not owe its completion, as it does its design, to American genius and enterprise. If our people are to lose by failing to grasp the importance of the enterprise, it is not the fault of their Government or representatives here, for all necessary information thereon was given years ago by Mr. E. G. Squiers, who was then our *chargé d'affaires* in Honduras, and who designed this road and

published to the world its superior advantages over all others for a transisthmian railway. In addition to the foregoing published and public facts, I have done my best to draw the attention of our railroad capitalists to the urgent need of transportation facilities in this country and to profits from investments for railroads. Mr. Squiers has perhaps given this subject more study and investigation than any other person, and he estimated the cost of the road to be not necessarily more than \$7,000,000, and that the road would pay for itself within the first four years. If this is anything near the truth, some of our capitalists will regret that they have let the opportunity slip of building this road, as it would not only have increased their fortunes, but would have gained them the title of public benefactors and the gratitude of the people of this Republic, where the want of railroad enterprise is so severely felt and the help of capitalists so much needed and sought.

When it is considered how this important question of interoceanic communication has been so long and continuously agitated, it is not a little surprising that there has never yet been but one way actually constructed, and that the little railroad crossing at Panama, and especially since the advantages of the Honduras route have been made so clearly evident. The Panama road cost twice as much per mile as Squiers's estimate of the cost per mile of the Honduras road, and yet it is certain that the Panama road has yielded rich returns for the capital invested. The Honduras route will be not only cheaper in construction, but cheaper in operation. It has better ports, easier facilities for embarkation and debarkation, better sources of supply, a healthier climate, and is shorter in distance and in time between the great commercial centers of the world.

As it is now probable that the road will be built under the aforesaid concession, I herewith forward official copy of the same, but without translation. Its most noteworthy feature is the vast amount of land it grants, thus enabling the syndicate to establish a large British colony in Spanish Honduras, which was done in what is now known as British Honduras, and which resulted in making the latter a dependency of Great Britain. It is not likely that this country can ever be made a dependency of the British Government either as a protégé, as Cromwell so early extended his British protectorate over that part of old Yucatan now known as British Honduras, or as a part of the present colonial system of England. (Report of Consul Herring, Tegucigalpa, November 25, 1888.)

TRANSPORTATION IN HONDURAS.

Progress in Honduras, not only commercially but in every way, is greatly retarded by lack of facilities for transportation. To remedy this difficulty the Government has been carrying on a work designed to give this Republic a complete system of good wagon-roads. The first link in this chain of communication—a broad, smooth road of easy grades—was completed two years ago. It connects Tegucigalpa, a city of about 12,000 inhabitants, with the ports on the Bay of Fonseca, some 90 miles away, and there with the vessels of the Pacific Mail Steam-ship Company, which regularly ply between San Francisco and Panama. This road is of great benefit to the trade of Tegucigalpa, the capital of the Republic, as it affords for the first time within the period of modern history means for comparatively easy and cheap transportation of goods from abroad, and of the produce for which these goods are exchanged. Soon after this road was finished another was constructed, connecting Tegucigalpa with the mining camps of the mineral district of Yuscaran, 45 miles distant. Over this new highway the mining companies have hauled large and heavy castings, which could not have been carried over the old trails at a cost within the bounds of reason. Within the last year another wagon-road has been completed from Tegucigalpa to the rich Rosario mine, at Sanjuancito, a distance of over 20 miles. And, by the way, a telephone line from Sanjuancito, via Tegucigalpa, to San Lorenzo, on the coast, near Amapala, is just finished by the enterprising Americans owning the Rosario mine. Within the last year another wagon-road has been constructed by Capt. F. M. Imboden, an American, who built the two first mentioned. This road extends from Tegucigalpa to the city of Comayagua, which was long the capital of the Republic, and is now, of all towns in the country, only second in size to Tegucigalpa, and is two days' journey away. The intention is to continue this road through the valleys of Comayagua, Espinal, and Sulaco to the terminus of the railroad, at San Pedro Sula, 37 miles south of Puerto Cortes, on the northern coast. This road is of the highest importance.

As far back as 1539, when this country was under Spanish rule, the governor of Honduras addressed a letter to the then Emperor of Spain advising the construction of a road over this same way to the Bay of Fonseca and representing that this was the best route that could be obtained for the transportation of goods and persons from Spain to Peru and other points on the Pacific Ocean. Most of the correspondence with people in the United States and Europe, with British Honduras and the West Indies, passes over this route; and many, if not most, of the visitors from the

United States to the seat of government here come by way of this road, through Comayagua. One reason for this is found in the fact that the only steamers making trips regularly, on fixed dates, between the United States and the north coast of Honduras run from New Orleans and Puerto Cortes. Another reason is that this route to the north, via Comayagua and Puerto Cortes, is much cheaper and more direct than is any other between Tegucigalpa and points in the States east of the Mississippi or in Europe. Mail from central cities of the United States, as Chicago, St. Louis, or Cincinnati, reaches Tegucigalpa in sixteen to twenty days if sent by way of New Orleans and Puerto Cortes, while that sent from New York or San Francisco requires from twenty-one to twenty-six for its transmission.

It will be seen that this road to Comayagua forms a link in what will be a chain of roads reaching from Puerto Cortes on the north coast, and only 900 miles from New Orleans, to La Brea on the south, some 1,670 miles south of the latitude of San Francisco. Connected with lateral branches to be made through the large and fertile valleys of the Salaco, of the Chamilicon, and the Santa Barbara Rivers, this system will not only afford comparatively easy and quick communication between Atlantic and Pacific ports, but it will also furnish an outlet for the products of three great valleys and of the countless fertile mesas and hill-sides and valley farms, naturally tributary to the large valleys.

From Comayagua to Puerto Cortes the road follows the lines selected, after careful survey by American engineers, as a route for an interoceanic railway from Puerto Cortes to Fonseca Bay. From Comayagua to Tegucigalpa the road is a departure from the proposed railway route, but it is evident that there would be little difficulty in constructing a railway where a wagon road of easy grades and curves has been made. Honduraneans and Americans having interests in this country are anxious for this railway to be built. The Government has offered most liberal terms to several parties who have proposed to build such a road. Several contracts have been made for that purpose, but so far nothing has been done in its construction since the completion of the short road of 37 miles from Puerto Cortes to San Pedro, and this is yet the only railroad in this country. The greatest obstacle in the way of this much desired interoceanic railroad is a contract that was made for its construction many years ago with an English company who built the 37 miles of road referred to and then abandoned the work, leaving the Government bound for a large debt of bonds issued for the company in the hope that the entire road would be completed under the contract. This railroad debt amounted, with interest, to \$32,500,000 in July, 1875, and no part of it has since been paid, and the interest on it has been accumulating at the rate of 10 per cent. per annum. It is believed that this debt is now bought up and held by a few capitalists, principally in London and Paris, and could be compromised or adjusted on very easy terms to be paid at a small per cent. of the face value of the bonds. At any rate, until this obstacle is in some way removed, there seems to be no cause to hope for the construction of this great highway, the advantages of which to Honduras, and, as a transisthmian route, to the whole world, have been clearly made known by Mr. E. G. Squiers, formerly United States chargé d'affaires to Honduras.—(Consul Herring, Tegucigalpa, Honduras, June, 1889.)

MINING INDUSTRY OF HONDURAS.

The interest and activity of gold and silver mining have been rapidly on the increase since the last report on the subject from this consulate. In the twelve months preceding this there have been denounced* under the mining laws more veins than any four years of the past. There is no record yet compiled, nor likely to be for a year, showing the number of mines so denounced, but I am assured by the chief of the mining bureau that this number may be safely put down as not less than one thousand. This shows a notably confidence of this people in the future mineral wealth of their country. The denouncements are mostly made by the natives. Foreigners usually ask for concessions from the supreme Government. At the last report there were not over thirty stamps in operation, now there are over a hundred. Within the last twelve months the Rosario mine, at San Juanito, has declared its first dividend. It is the pioneer of about a dozen of non-active American companies, and is the first and only one of them that has paid a dividend up to date.

Since last report the Government has created a mining bureau, which may be addressed by any one abroad desiring information upon the minerals or mining industry of the country. There has been established an assay office, which is attached to this bureau, and in which are kept for public exhibition and for study and reference a collection of many specimens of geological and mineralogical formations of the country. There are also now a government geologist and an inspector-general of mines. And, furthermore, there is in contemplation a national school of mines, which will perhaps be in operation some time during the coming year. Such facts

*To denounce mines in Honduras means to take up or enter.

show that the Government as well as the people have a growing faith in the mineral resources of the country. Keeping pace with this increasing interest in mineral development, a Honduras mining syndicate was formed at Tegucigalpa in June last for the purpose of buying and selling mineral properties, exploring and working old veins, and discovering new ones.

Although the mining industry as operated under the modern system of improved machinery is but in its infancy in Honduras, yet recent evidences of the power it is destined to wield in the development of this country are seen in mines that have been raised into most valuable properties since its introduction. It is gratifying to add that most, and perhaps all, of such improved machinery comes from the United States, and the increasing demand for the same will doubtless continue to be supplied by the manufacturers of our country.

No doubt what are thought to be the best of the old mines are already taken up, but there are still other good mines that may be denounced under the mining laws, purchased reasonably, or a controlling interest obtained in same by simply placing the necessary machinery upon the grounds. There are also many mines of low-grade ores which can not now be successfully worked, and command but little if any attention, which will be gladly seized upon when transportation facilities become as they should, and, therefore, as they will be, and especially since exceedingly low-grade ores, worth far less than these, can be successfully worked.

Whether these mines are as valuable as those in the United States or not, it may, nevertheless, be safely stated that they are cheaper in proportion to the real richness of the ores. And for this reason, with the increasing facilities for transportation (now so very much needed), the hope is not without its foundation that there is to be a continual and healthy growth of the mining industry in Honduras. Of course, there may be expected the usual failures, resulting from mistakes in the selection of mines, and from mismanagement or dishonesty or both, in the home or foreign office. There are yet old inhabitants, who worked these mines under the Spaniards, who will testify to the rich quality and abundant quantity of the ores. Even one who knows absolutely nothing about mines, mining, or miners, but can weigh properly the credibility of testimony, must conclude that tradition is wholly unreliable, and that history, moreover, has been most unreasonably and unwarrantably falsified, or else these mines are well worth the attention of the capitalists of the world. If the testimony of living witnesses, if the traditions and the written history of the past are worthy of belief, the Spaniards and the Spanish Government have derived immense fortunes and revenues from these same mines of Honduras, and this, too, without the aid of the great improvement in the mining machinery of modern times. But if these mines were so valuable formerly, why is it that they have not produced more bullion and declared more dividends of late years? It is because in the great revolution of 1821, when this people threw off the yoke of Spain and drove its dominions from their borders, there also went with the Spaniards, who left the country, the most of the intelligence and capital that had been directing and was necessary to direct these mining operations. Since then the mines, until lately, have been falling into obscurity.

There was no effort on the part of the Government to advertise its mineral resources. Whether from a fear that the wealth of their mines would attract the cupidity of some other nation that would come and again reduce them to slavery, or from a desire to preserve the mines exclusively for Honduran enterprise, is unnecessary to state. There was, however, as was very natural, a strong prejudice against foreigners. Laws were enacted preventing them from acquiring or holding property. Under these circumstances it is not strange or irreconcilable with the intrinsic value of the mines that they had fallen almost, if not quite, into forgetfulness by enterprising capitalists abroad, especially as the rich mines of the United States, Mexico, and other countries were more fairly and freely open to the competition of the world. Nor is this all. Not only was foreign enterprise excluded from the country, but the natives themselves could not properly work the mines on account of the incessant wars and rumors of wars, even had they otherwise all the necessary means. It is easily understood that without peace, and uninterrupted peace, there can be no such thing as large and successful mining operations. It was only during the administration preceding that of the present chief executive that the prejudicial laws referred to were repealed. But now they have given place to foreigners. Not only have the laws improved towards foreigners, but also the minds and hearts of the people, to the extent that enterprising capitalists from abroad are now more than welcome; they are gladly received, both by the Government and by the people. As peace is prolonged the prospects brighten for the opening up of good roads.

The climate is always both healthy and comfortable in the mining regions. The water supply for mining is abundant, flowing six months of the year; but in the dry season there is a scarcity in some places. By an outlay of the necessary expenses, sometimes considerable, for flumes, etc., water sufficient for work the entire year may be brought to most places where it is needed. Wood is plentiful now, but

the time will likely come when it will be scarce in some of the mineral districts, and unfortunately, there has not yet been discovered sufficient coal or other fuel to take its place. For these reasons it is very necessary, when one wishes to purchase or locate a mine, to have a care, not alone for the richness of the ore, but also the water and their rights, privileges, and facilities.

There is no mining now of any minerals in Honduras except that of gold and silver. At this time Honduras is not the place for prospectors. There is no room here now for either American prospectors or mining tramps. In the first place, because the country is already thoroughly prospected, and even if it were not a poor prospector, single-handed and alone, can not compete with the rich Honduras syndicate before alluded to. And, moreover, though the natives have not the means to work their mines, they are, nevertheless, recognized as good prospectors, and they know the country and the mineral indications peculiar to the country, and they have had very long experience. Although their country may have been neglected or forgotten by capitalists and the outside world they themselves have never lost the best mines of the old Spaniards or ceased to hunt new veins. The native prospector, as well as the common miner, can live well on what an American would think starvation to him. They can live on 10 cents a day as comfortably to them as the average American can live on a dollar a day—ten times as much. Wages are very low. Not even the Chinaman can compete with the natives, and I, therefore, do not know a single Chinese laborer in the whole Republic. When skilled Americans are needed to direct the common labor they are usually contracted with in the States and brought here at the expense of the companies.—(Report by D. W. Herring, U. S. Consul, Tegucigalpa, October 31, 1888.)

SALVADOR.

This is the smallest and most populous of the Central American Republics, there being no less than sixty-three inhabitants to the square mile. The central part is an upland of a mean elevation of 2,000 feet above the sea, bounded on the Pacific slope by a chain of volcanic peaks, beyond which is a strip of lowland from 10 to 20 miles wide. The Gulf of Fonseca, 50 miles long and nearly 30 miles wide, is said to be the most beautiful harbor on the Pacific coast.

Mines of gold, silver, copper, lead, iron, and anthracite coal are found within the borders of Salvador. Some of the principal cities are Santa Ana, 25,000 inhabitants; Salvador, 16,327; Chinandega, San Miguel, etc.

RAILROADS IN SALVADOR.

In 1882 the first railway in the Republic was opened from *Acajutla to Sonsonate*, 15 miles, with 3-foot gauge. The Government guaranties an annual dividend of 12 per cent. This line is to be extended to Amate Marin over a distance of 80½ miles. Work is progressing on a railroad from Amate Marin to the capital, which will be approximately 25 miles in length.

A line is projected to connect Santa Ana with Acajutla, in aid of which about \$300,000 have been subscribed by native capitalists.

Another line is projected from *La Union to San Miguel*, and a company is being organized in London to build it.

A road is projected by the Government from the port of La Libertad to San Salvador.

The *Salvadore Central Railway* is projected from La Union, Gulf of Fonseca, to the Guatemala boundary line. The preliminary work has been completed. The Government has granted a subsidy of \$10,000 and guaranties net earnings of \$1,000. D. Butterfield is the concessionaire.

A tramway 10½ miles in length is in operation between San Salvador and Santa Tecla; it was built by the Government at a cost of \$200,000, but has recently been sold to F. Camacho, Guatemala.

In "Capitals of Spanish America," Mr. Curtis says that a road was spoken of to traverse the entire State in the interior valley parallel to the sea-coast, with branches to the important cities, and that the work was not considered either difficult or expensive.

Of these great highways of modern civilization there are but 35 miles in actual operation, with a few more in process of immediate construction and many more in the contemplation of the Government. This little line of road leading in the direction of the capital runs out from Acajutla, the extreme southwestern sea-port of Salvador to the village of Atios. This point has but recently been reached and a depot established.

Although there have been many concessions or grants made by the Government to parties to construct railroads through sections of its territory, it seems that the peculiarly rugged topography of the country has hitherto interposed insuperable obstacles to the consummation of their plans and purposes. The Government, however, being the proprietor of a section of this road and of a large interest in that over which it does not exercise exclusive supervision with the reserved right to purchase at will, appreciating the needs of its people and the advantages of the prompt and rapid interchange of products and commodities, has set to work on its own account to extend this line of road to the capital, and the work is being executed under the supervision and direction of an enterprising American, Mr. Braunon.

It is contemplated by the Government to extend this road, when circumstances favor, through its entire length of territory, making La Union, which is one of the finest harbors on the Pacific, at the base of the great mineral district of San Miguel, its other terminus. In the meanwhile the road will have traversed one of the richest mining and agricultural districts (now almost unexplored) in all Central America. When this work shall have been accomplished, in connection with the prospective construction of the Nicaragua Canal, a new era will dawn upon this corner of the Western Hemisphere. (Report by Thomas T. Tunstall, U. S. consul, San Salvador, July 4, 1889.)

NICARAGUA.

Nicaragua is distinguished from the other Central American countries by its lower level and the great lake, which offers so inviting a route for an interoceanic canal. Geologically, Nicaragua is no less rich than Honduras.

The only port on the Caribbean Sea is San Juan del Norte, and this is not a very good one; the Pacific coast is bold and rocky, but has the convenient harbors San Juan del Sur, Brito, and Realejo.

Among the cities are Managua, 1,800; Granada, 16,000; Leon, 25,000; Rivas, 10,000; Chinandega, 11,000; Libertad, 5,000; Matagalpa, 9,000; Ocotar, 3,000; Greytown, 1,512; Blewfields, 1,000.

At Rivas the annual rain-fall is about 102 inches; elsewhere the summer rain-fall is about 90 inches, and in the winter less than 10 inches. The mean annual temperature is about 80° Fah., falling to 70° at night and rising to 90° in the hottest weather. This does not refer to the highlands.

RAILWAYS.

The only railway in operation consists of two sections, the first from *Corinto to Momotombo* (Lake Managua), 58 miles, begun in 1879 and completed December, 1883; the second from *Managua to Granada* (Lake Nicaragua), 32 miles, opened March 1, 1886, and of 3 feet 6 inches gauge. Connection is made between these two sections by steam-boats on Lake Managua, owned by private parties, and which are soon to be replaced by boats owned by the Government.

The road is owned by the Government and operated under the general direction of the minister of public works. In 1888 the cost of maintenance was 55 per cent of the gross earnings.

A railway has been projected by the Government from San Juan del Sur via Rivas to San Jorge, on Lake Nicaragua, but no work has yet been done.

A branch from Chinandega to El Viejo, about 19 miles, has been surveyed and located. Another Government survey is in progress for a line to connect the City of Matagalpa with some point on the east side of Lake Managua.

A concession for a railway connecting the City of Matagalpa with the east-coast at the mouth of the Ramos River has been granted by the Government to Don Pedro Ramirez, of Managua, who has sold it to English capitalists. The road is to be 90 miles long, and will tap the rich mining region of Acoyapa and La Libertad.

COSTA RICA.

The Atlantic coast is low and covered by dense forests, while the Pacific slope is characterized by wide savanas or llanuras. Between these borders are high volcanoes and an elevated table-land 3,000 to 4,000 feet above the sea, the latter almost the only cultivated land in the State. The forests are largely composed of valuable trees—mahogany, ebony, brazil-wood, and oak.

The range of mountains called the Cordillera of the Andes passes through the country from southeast to northwest, and is divided into several systems, separated by the valleys of the Reventazon and the Rio Grande. The first system forms two groups, one from the northwest boundary southeast to Mount Aguacate; the other consists of Mounts Poas, Barba, and Irazu. A large plain covers the northeastern part of the Republic, through which the San Carlos and Sarapiquí wind their way to the San Juan, and the Rio Frio and many smaller streams to Lake Nicaragua. Mr. Paul Billeby says: "This region is even to-day almost unexplored."

The San Carlos River is navigable 20 leagues inland from its mouth at the San Juan. The latter river forms a portion of the northern boundary of the State.

During the rainy season the rivers become torrents, especially on the Atlantic side. Several rivers of the northern slope present this peculiarity, that while their left banks are formed of dry lands free from marshes, their right banks present a succession of lagoons and localities frequently inundated, rendering them often unhealthy.

The hot lands extend to 3,000 feet above the sea, the Pacific side being the hotter. Above this height the climate is temperate. On the coast the mean temperature is from 20° to 26° centigrade, and on the highlands from 14° to 20°, corresponding to 57°, 68° and 79° Fahr.

Besides gold, the principal metals whose existence has been established beyond doubt in Costa Rica, but which have not been exploited, are, iron in abundance, copper, argentiferous lead, and quicksilver. Among other mineral products are sulphur, kaolin, lignite, limestone, marble, gypsum, alum, and mineral waters.

The exports of this country are coffee, dye and cabinet woods, bananas, and other fruits, hides, mother-of-pearl, sarsaparilla, cocoa-nuts, India rubber, etc. The principal imports are cotton goods, hardware, and provisions.

The principal ports are Limon on the Atlantic, and Punta Arenas on the Pacific, the direct distance between them being 102 or 103 geographical miles.

The population of the provinces of Costa Rica are, San Jose, 64,000; Alajuela, 51,000; Cartago, 34,000; Heredia, 29,000; Guanacaste, 16,000; Punta Arenas, 8,500; Limon, 2,000; containing the important cities of San José, 15,000; Cartago, 10,000; Heredia, 9,000; Alajuela, 6,000; Punta Arenas, 1,800.

HIGHWAYS.

From Cartago to Punta Arenas there is a fine highway, which is very uneven at the summit of Mount Aguacate, where it has an altitude of about 4,132 feet above sea level. It passes through Alajuela, Atenas, San Mateo, and Esparta, the total length being about 50 miles, owing to the circuitous route necessary to climb the elevations. Another important highway runs from San José, in the direction of La Palma; it crosses that height at 5,000 feet and then descends to Carillo 1,400 feet. In the 17½ miles separating these two places, the road overcomes 3,600 feet of elevation. The road to Nicaragua begins at La Barranca, near Esparta, and crosses the province of Guanacaste 90 or 100 miles; it is bad in the rainy season because the even surface retains the water. Starting from Candelaria, south of San José and partly following the Pacific coast, there is a bridle path through Terraba and Boruca, ending on the Colombian frontier. A path starts from Angostura east of Cartago and leads to Talamanca.

The general traffic at the ports of the republic, imports and exports, can be taken

at 66,500 tons, and the traffic of the interior at 40,700 tons. About 50,000 tons of the general traffic are carried by the Atlantic Railroad, and judging from the past this will probably increase 40 per cent in the next five years. The freight per ton by the railway is \$17 American gold.

RAILWAYS.

The Government projected about 1870, an interoceanic line from Punta Limon to Punta Arenas, a distance of about 172 miles. Construction was begun in 1871, but three sections only were completed, as follows: From Punta Limon to Carrillo, 70 miles; Punta Arenas east to Esparta, 14 miles; and from Cartago west via San José to Alajuela, 26½ miles; the latter division was opened January 19, 1872, the others as completed. Total built, 110½ miles. The line up the Reventazon Valley to Cartago, 48 miles, is now being built by English capitalists represented by M. C. Keith, and is to be completed by January, 1890. The earnings on the completed road are over 10 per cent. on the invested capital. From Limon to Cartago is 95 miles. The distance from Carrillo to San José is about 28 miles, over a steep mountain cart road. Esparta is connected with Alajuela by a mountain cart road, a distance of 35 miles.

The Government has appropriated \$25,000 for a final survey of the part between Alajuela and Esparta, and proposals have been received for its construction. It is also intended to build a branch to the Port of Tivives. Lately a concession has been granted to an English company to build from San José to Esparta, about 36 miles, and another from a point near Esparta northwestward through Guanacaste to the Nicaragua boundary.

Another railway has been the subject of study of late, to unite Lake Nicaragua at the outlet of the San Juan River, with Punta Limon, which is in the hands of the Costa Rica Railway Company (limited) represented by M. C. Keith. This new road will start from Jimenez (10° 10' latitude and 83° 45' longitude), on the Atlantic Railroad, taking a north northwest direction through a very rich country for timber and agriculture, crossing the Sarapiquí at El Muelle, thence northwest to the Frio River at its entrance into Nicaraguan territory, a distance of about 90 miles from Jimenez. This line, with part of the Atlantic Division, might form a portion of an intercontinental railway, Matina being probably the starting point southward.

An English syndicate has secured a concession to build a road paralleling the Nicaragua Canal.

The cost of constructing railways, judging from past experience, will be, complete, from \$60,000 to \$70,000 a mile in the worst situations.

RAILROADS IN COSTA RICA.

The railroads already completed in Costa Rica are—

(1) From *Port Limon to Carrillo*, 70 miles—Carrillo being connected with San José by a steep mountain cart-road, a distance of 28 miles.

(2) The road from *Cartago to Alajuela*, passing through San José and Heredia; total length, 25 miles.

(3) From *Punta Arenas to Esparta*, 12 miles, Esparta being connected with Alajuela by a mountain cart road, a distance of 35 miles.

To complete the connection with Port Limon there is now being constructed 50 miles of new road from Cartago to a point near Siquires, on the Reventazon River. This new road is about one-third done. According to the terms of the contract with Mr. Minor C. Keith (contractor), it should be completed August, 1889, but Mr. Keith has had many difficulties to contend with, and it is not probable that it will be completed before August, 1890. The road from Port Limon to Carrillo (No. 1), from Cartago to Alajuela (No. 2), and the new line from Cartago to Siquires, together with the wharf at Limon, have been transferred to and are owned by the Costa Rica Railway Company (limited), of London. The Government of Costa Rica also granted to said company 800,000 acres of unimproved lands. The Government now owns, however, one third of the stock of said company. The Government also owns and

operates the railroad from Punta Arena to Esparta (No. 3). To preserve the trade of California with Punta Arenas it is necessary that the road from Esparta be extended to the interior. Otherwise, when through connection is made with Port Limon, upon the completion of the missing link from Cartago, all trade will go by way of Port Limon. This is important to San Francisco, and her business men could well afford to obtain from the Government of Costa Rica the transfer of the line from Punta Arenas to Esparta, and extend the same to the interior. If, however, the Nicaragua Canal is to be opened, and it is found advisable to follow the line mapped out by Mr. Menocal in 1885, I consider it of utmost importance to the trade interests of the United States to secure a railroad charter from this Government to run said road from the valley of the San Carlos River to San José.

It is observed that Mr. Menocal (see page 26 of his report) proposes to build a dam 52 feet high at Ochoa, just below the point where the San Carlos empties into the San Juan River. The San Carlos is now navigable, I understand, by small boats to the "muelle" (wharf), some 30 miles. From this muelle to San José is some 60 or 70 miles. When the dam of 52 feet is built at Ochoa the San Carlos will be navigable much higher up. The San Carlos country is considered the finest section of Costa Rica. The lands are said to be of inexhaustible fertility and well adapted to the growth of bananas, cacao (chocolate bean), and cattle. At present there is no outlet to this section and it is undeveloped. A grant of lands along the railroad could be most probably obtained and would prove valuable, but, what I consider of far more importance, would give the trade of this country to the United States. The proposed road connecting with the canal would connect with steamers going both to ports on the Atlantic and on the Pacific. The aggregate exports and imports of Costa Rica last year (1887) were \$11,000,000, of which the larger portion goes to and comes from Europe, and necessarily so when the ways of communication are owned in Europe. To illustrate: The freight on coffee per ton from Punta Arenas to New York is \$26.40; to England, £3. From Limon to New York, \$10; from Limon to England, £1 10s. It is also greater from Punta Arenas to San Francisco than to England, though I have not the exact figures. I think it very important to obtain this railroad charter to the San Carlos as soon as possible; otherwise it will be taken by an English company. Costa Rica is very anxious to have the canal on the route of Mr. Menocal's survey of 1885 rather than on the new line now being surveyed, and in making arrangements with her for the former route this railroad charter and grant could be secured on favorable terms. It may be that an effort will be made by English capital to secure this or some other railroad charter at the next Congress, which convenes in May. I have had some slight intimation that there is now a project on foot for a survey for a new railroad by an English company, but whether it is in connection with the grant of the 800,000 acres of land above referred to or another scheme I have not been able to learn.

I inclose a small map, upon which I have marked the road now being constructed from Cartago to Siquires, the proposed road from Esparta to San José, and from the muelle, on the San Carlos, to San José. (Report by J. Richard Wingfield, U. S. consul, San José, Costa Rica, March 30, 1888.)

RAILWAY SYSTEM OF CENTRAL AMERICA.

The late president, General Barrios, of Guatemala (as is President Menendez, of Salvador), was an earnest friend of the United States. Barrios, as does President Menendez, favored the assimilation of the institutions and business methods of his country to those of the United States. Barrios's ambition and the jealousy of his neighbors led to war with the little Republic of Salvador, which cost Guatemala a humiliating defeat and Barrios his life. Through his policy Americans were induced to invest in Guatemalan railways, banks, and coffee and sugar plantations. He projected and began the construction of a railway from the bay of San Tomas, on the Caribbean Sea, to his capital, Guatemala City, a distance of 150 miles, there to connect with the existing narrow gauge of the Guatemala Central, 75 miles in length, terminating on the Pacific at the open roadstead of San José. Forty miles of Barrios's transcontinental road, from Puerto Barrios to Guatemala City, were half finished when his untimely death occurred.

Barrios's worthy successor, the vigorous President Barrillos, pursues the policy of his predecessor, favoring the construction of the transisthmian and other railways projected in Guatemala, and notably of that designed to connect the capitals of Guatemala and Mexico. In truth, General Barrillos and other Central American statesmen have not failed to discover that no Central American Union is desirable which may be pinned together with bayonets, and none desirable and enduring can be achieved save through the intervention of perfect interstate railway systems.



THE MESA OF SALVADOR.

Discovering, during a three days' sojourn at La Libertad, at the sea level in Salvador, how fatal to unacclimated persons was the breath of the sea at the very shore, drenched as it is each day by tides which leave heaps of shell and other fishes to rot instantly beneath the rays of the equatorial sun, and learning that Panama was thus made a grave-yard, because ships can not touch the shore and passengers must inhale yellow death through weary deadly days and nights while tugs and lighters discharge tedious tasks—seeing and learning this at La Libertad nearly two years ago, I sought a perfect harbor on the Pacific coast whence to extend a railway to another on the Atlantic. It is the foul breath of the sea-shore at the sea level at points unswept by winds from boundless seas that makes the word "Panama" the synonym of pestilence and death. To avoid detention at the sea-shore in hot latitudes ships must anchor at wharves within land-locked harbors whence passengers may be transferred instantly by railways to the mesa or elevated plateau from 2,000 to 3,000 feet above the sea level, and extending from one to the other ocean.

A CONFESSED FACT.

The Nicaragua Canal and the Ship Railway and De Lesseps Canal each and all are at the sea level. No soft, cooling wind from the Pacific may find its way into either canal or follow gigantic locomotives tugging at ships crossing Tehuantepec, and the acclimated alone may cross the continent in safety at the sea level; but there is perfect immunity from climatic diseases the instant the traveler reaches an elevation of 1,000 feet above the sea. Commerce, therefore, will traverse the ship railway and the canal; men and women will prefer this transisthmian railway, having a perfectly land-locked harbor at each terminus and an elevation at no point after leaving the coast of less than 2,000 feet above the plane of the two oceans.

WONDERS OF THE INTERIOR.

Eighty miles from the harbor of La Union, going north through the greatest length of Salvador, the traveler will rest at the fathomless lake of Ilopango, 25 miles long and 8 to 10 miles wide. Its tepid waters occupy craters of extinct volcanoes. In 1870, when Salvador was shaken violently by earthquakes, the water of the lake sank in the night 9 feet, and along its shores were gathered earthen vessels curiously colored, and images carved out of porphyry, and others precisely like those at the museum at Washington taken from Egyptian tombs. A few miles southeast from the railway the ever-active volcano Izalco rises 6,000 feet, a perfect cone, from the plain about Armenia. The railway crosses the State of Santa Ana, a district of Salvador 50 miles square, producing, it is stated, more coffee than any equal area of land in the world. In truth, every acre of the *mesa* of Salvador is cultivated, each producing from two to four crops annually. The products are rice, tobacco, indigo, sea-island cotton, coffee, sugar, cocoa (chocolate), india rubber, and Peruvian gum—so called because it was originally sent from Salvador to Peru and thence to European markets. The railway penetrates from La Union to Puerto Barrios, or to Port Izabal, whichever harbor may be its northern terminus, a very paradise. The average density of population along the whole route exceeds 100 for each square mile. Here villages and towns are almost continuous, and the population—Aztecs 92 per cent. and Spanish 8 per cent.—toil most industriously. Labor costs 20 to 25 cents, and food 10 cents per diem. The thatch-roofed, floorless adobe huts of the natives (Aztecs) are the cheapest possible, and only useful in protecting the occupants against rain-storms of July, August, and September (the rainy season), when the country is flooded almost every day. There is not a stove or fire-place in any house in the Republic; none are needed where the thermometer never falls below 70 or rises above 80 degrees. So great is the annual production of fruits, as well as of indigo, tobacco, sugar, and coffee, and so short the distance from Port Barrios to Mobile, that it is believed that most delicate and delicious tropical fruits, never seen in the United States, will be distributed everywhere from Mobile; and so redundant are the crops of Salvador and of the districts of Guatemala penetrated by this railway, that it must have two tracks—one for immense local, the other for interoceanic, freights and travel.

POLITICAL RESULTS.

But the great good to be achieved by this transisthmian road consists not so much in the fact that it will enable traveling multitudes to cross the continent where narrowest, without possible danger from deadly fevers and plagues incident to detention at the sea-level, but with its branches, binding together these five Central American

States in perfect political and social unity, it accomplishes their perfect *commercial* annexation to the United States. Puerto Barrios is within fifty hours or less of Dauphin's Island wharves at Mobile, and only sixty hours would be required to transfer a traveler or bale of goods from Mobile to the Pacific coast harbor of La Union. United States and other steamers now pay from \$20 to \$30 a ton at La Union for English or Australian coal. It may be delivered there from Alabama, over the transisthmian railway, for from \$5 to \$7 a ton. Therefore, the Government of the United States as well as the people must confess keen interest in this short, easily-built railway, which surely must accomplish most beneficent political and commercial results.

AMERICANS PREFERRED.

After the plan of the transisthmian railway was conceived and the details published, and after applications were made for charters in Salvador and Guatemala, English and French bankers and capitalists sought much the same concessions; but the governments of Salvador and Guatemala both gave preference to the American applicant for these franchises. The Salvador charter conceded a monopoly for fifty years of the right of excess to the matchless harbor of La Union. The cost of a double-track road from La Union to Port Izabal, or Port Barrios, it is stated by engineers who have surveyed part and traversed the whole route of about 300 miles, will not exceed \$35,000 a mile; there will not be a tunnel on the whole line, or a grade greater than 70 feet on any mile, and this only at each terminus, whence locomotives must climb, within 30 or 40 miles, to the mesa 2,000 feet above the sea.

The rapid multiplication of foundries, furnaces, and forges in Alabama and other Southern States induced the writer to seek, for the behoof of the commonwealth which is his home, an insatiable market for its products, to be found alone along the western shores of the three Americas. From every trading place of as many as two or three thousand inhabitants along this interminable coast a railway will soon lead to farms and villages of the interior. Twelve such railways are now building between the southern confines of Chili and California. If the transisthmian railway be speedily finished, the iron and coal and steel of England and Australia may be supplanted everywhere on the Pacific by that produced in the United States. (Report by L. J. Du Pre, U. S. Consul, San Salvador, December 13, 1887.)

BRITISH HONDURAS.

A road has been projected from Belize westward 90 miles to the frontier; from there it will probably go to Lake Peten.

SOUTH AMERICA.

It will be observed that the continent of South America has a general triangular shape. In the north a mountain system runs east and west; again we find the same thing farther south in Brazil. In the west is the great chain of the Andes traversing the entire continent from north to south. Leaving Patagonia, they enter Chili, rising higher and higher, until they culminate in the volcano Aconcagua. At the boundary of Bolivia, the chain turns to the northwest and separates into two, inclosing the table-land of the Desaguadero, a wonderful valley, having at one end Potosi, the highest city in the world, and at the other Cuzco; between them is Lake Titicaca, from which not a drop of water escapes except by evaporation. At Pasco a third cordillera is thrown off, and with a triple arrangement and a lower altitude the Andes enter the Republic of Ecuador, where the double line is resumed. Just above the equator one ridge is formed which then spreads out like a fan; one cordillera goes to the east, giving rise on its eastern slopes to the Orinoco and its tributaries, the central cordillera having the volcano of Tolima, soon loses itself in the Carribbean Sea, and the western turning to the left, with a much lower altitude traverses the isthmus, rises in altitude, and expands again to form the table-land of Mexico. The snow limit at the equator is 15,800 feet; at 27 degrees it is 13,800 feet, and at 33 degrees it is 12,780 feet. Twenty-two of the fifty-one volcanoes in the Andes have their summits covered with perpetual snow, and twenty encircle the valley of Quito.

The Andes almost stop the trade-winds (which are again felt at 150 miles from the coast), causing them to drop their moisture on the eastern slopes, and thus give rise to those great rivers, the Orinoco, the Amazon, and the La Plata, which, flowing eastward, almost quarter the continent.

Near Cerro de Pasco in a little lake, just below the limit of perpetual snow, and scarcely 60 miles from the Pacific rises the greatest river in the world. Flowing northerly 500 miles through a deep valley, it turns on reaching the frontier of Ecuador to the right and runs easterly 2,500 miles. At Tabatinga, 2,000 miles from its mouth, it is a mile and a half wide. So many and far-reaching are its tributaries that it touches every country of the continent except Chili and Patagonia. These tributaries communicate with each other by so many intersecting canals that Central Amazonia is a cluster of islands, and if a circle be drawn 1,600 miles in diameter it will include an ever green unbroken forest.

The Amazon really lies in a plain, for the slope from the mouth of the Napo to the ocean, in a direct line 1,800 miles, is but 1 foot in 5 miles. A fair conception of this will be obtained from an examination of the altitudes on the edges of this plain, bounded by the grassy plains of Venezuela, the chain of the Andes, and the table lands of Matto Grosso.

The Cassiquiare, a natural canal three-fourths of a mile wide, and with a portage of only two hours, connects the headwaters of the Orinoco and the Amazon.

Of the tributaries of the Amazon, the Putumayo and the Napo rise among the mountains of Colombia and Peru. The Pastassa rises in the valley of Quito and traverses a very steep course; the Marañon, or the main river, rises near Cerro de Pasco. The Huallaga comes from the Peruvian Andes at an elevation of 8,600 feet, and is navigable for steamers to the port of Moyobamba. Its mouth is a mile wide. Canoe

navigation begins at Tinga Maria, 300 miles from Lima. The fertile plain through which it flows is very attractive to an agriculturist.

The Ucayali originates near Cuzco. For 250 miles above its mouth it averages half a mile in width and has a current of 3 miles an hour; at Sarayacu it is 20 feet deep and it is navigable at least 100 miles. East of the Ucayali are six rivers rising in the unknown lands of northern Bolivia, of which the most important is the Purus, a deep, slow river over 1,000 miles long, open for navigation half way to its source.

The Madeira is about 2,000 miles in length. One branch, the Beni, rises near Lake Titicaca; another, the Marmoré, near Chiquisaca, within 15 miles of the sources of the Paraguay, and if it were not for the rapids 480 miles from its mouth large vessels might sail from the Amazon into the heart of Bolivia. Another great tributary of the Amazon, the Tapajos, about 1,000 miles long, rises only 20 miles from the headwaters of the Rio Plata.

A number of routes are open across the continent: At the harbor of Buenaventura in Colombia, a railroad is to be built to Cali in the Cauca Valley. The valleys of the Magdalena and the Cauca have been followed to their sources, but I do not know of any passage in that vicinity to the headwaters of the Amazon. From San Lorenzo, Bahia, and Guayaquil, in Ecuador, there are routes to Quito, whence the eastern ridge may be crossed to Papallacta, Archidona, and the Napo. The route from the Quito Valley, via the Pastassa River in Ecuador, is difficult on account of the rapids, and dangerous because the inhabitants are hostile. The route via Loja in Ecuador and the Marañon is also difficult. The best route of any is from Trujillo in Peru to Caxamarca, Chachapoyas, and Moyabamba, thence from Balsa Puerto by canoe to Yurimaguas and down the Huallaga.

From Lima in Peru there is a road to Tinga Maria, via Huanaco and then down the Huallaga, which is difficult in the rainy season; or from Lima to Mayro, via Cerro de Pasco and Huanaco, and down the Pachitea and the Ucayali.

There is a route through Bolivia to Cochabamba and down the Marmoré and Madeira, or to Santa Cruz and the Paraguay River. The route through the Uspallata Pass in Chili is now followed by a railroad to join the railways of Argentine.

But little is known of the Amazon basin beyond the limits of the river banks; it is thinly inhabited and only by uncivilized people. All the travelers through this region speak of the density and profusion of the foliage. The Pampas of Sacramento are thickly covered with trees, and the vegetation in all parts almost entirely prevents communication.

In Raimondi's Peru there is mention of a journey by Señor Reyes from Popayan, in Colombia, across the Cordilleras and down the Putumayo, but no description is given of the route.

In the proceedings of the Royal Geographical Society for 1880 there is a statement of the parts of South America not yet thoroughly explored. They include the headwaters of the Amazon in Ecuador and Colombia, and the parts of Colombia between the western Cordilleras and the Orinoco and Negro, and between the river Meta and the rivers Uaupes and Japura.

The inhabitants of South America live upon its outer borders; in the southern part the mass of population is on the sea-coast, farther north on the interior plateaus.

On the Andes the rainy season sets in toward the end of September and lasts until March, when the dry season begins. During the rainy season the roads become so bad that travel is almost suspended.

Gold and coal are found at Chiriqui, Colombia, and in abundance in other parts of the State. Coal is found near Huaucá, in Peru, at a height of 14,700 feet. Among the exports of South America are gold, silver, copper, tin, and other ores, guano, niter, sugar, wool, cotton, tobacco, vanilla, cinchona, cocoa, Peruvian bark, India rubber, coffee, hides, wheat, etc. The soil of the mountain valleys is rich and fertile.

Traffic is carried on by mule or railway directly to the coast; or by mule, almost in the opposite direction to the headwaters of the great rivers, whence it goes to the

coast by canoe and steam-boat. Many of the rivers have regular lines of boats. The Magdalena is navigable to Honda for steam-boats and above that for a long distance by canoe. The Putumayo is navigable to the boundaries of Colombia; the Marañon, Huallaga, Ucayali, Purus, and Marmoré carry the products of Peru and Bolivia; the La Plata and San Francisco those of Bolivia, the Argentine Republic, Uruguay, Paraguay, and Brazil; and the Orinoco, of Brazil, Venezuela, and Guiana.

COLOMBIA.

GEOGRAPHICAL FEATURES.

The republic of Colombia may be called one of the most important countries of South America, situated as it is near Central America and connected with it by the Isthmus of Panama. In the south the Andes Mountains, dividing into three chains, traverse the country from north to south. The western Cordillera follows the coast, with a decreasing altitude, turns to the northwest, and traverses the isthmus to Central America. On the Atrato River line its highest point is about 900 feet; on the Panama canal line it is only about 300 feet. Beyond this point the elevation increases. The central Cordillera passes northward until it is lost in the Caribbean Sea. In this chain lie several volcanoes of great height; in the northern part it is somewhat broken and of lower level. The eastern Cordillera turns slightly to the east in its northern part and forms the boundary between Colombia and Venezuela. In the southern part of the republic there is a portion of the chain previously mentioned as crossing the continent from east to west.

The topographical features of the isthmus lend themselves in numerous places to interoceanic communication. Routes for interoceanic canals have been surveyed at the Chiriqui Lagoon, at Colon, where work has been in progress for a canal, at the Gulf of San Blas, Caledonia Bay, and the Atrato River. The ranges of mountains determine the water systems. On the western coast small streams flow into the Pacific; in the interior, the Cauca, with its many tributaries, rises at an elevation of 14,000 feet, and flowing north passes through the lower portions of the central Cordillera to unite with the Magdalena not far from the coast. The Magdalena, navigable for 600 miles, and having the volume of the Mississippi, is the great artery for the commerce of Colombia. It flows northward into the Caribbean Sea between the central and eastern Cordilleras, and it is said that both the Cauca and the Magdalena have their origin in the Lakes Las Papas.

At Honda the rapids in the river form the head of steam-boat navigation. Navigation is carried on for 175 miles above them by steam-boat and for several hundred miles further by canoe. The Cauca Valley is throughout much higher than that of the Magdalena. The Cauca River is navigable for a short distance only, to the rapids, but above them a steam-boat line carries navigation several hundred miles.

On the slopes of the eastern Cordillera are numerous sources of the Orinoco and the Amazon, separated by the central range. The whole of Colombia may be called mountainous, except along the northern coast, where the land is level and the water-courses numerous. Communication is consequently difficult in all parts. The old maps show the great Spanish highway from Quibdo on the Atrato southward to Popayan, Pasto, and Ecuador. This highway is said to have been used to carry the products of the mines of Peru, Ecuador, and Colombia to the port of Cartagena, whence they were taken to Spain. The water-courses and the great mountain valleys constitute the highways. In the north and northwest the ranges are easily crossed at numerous points (the canal routes have already been mentioned), but in the south the passages are few. The one best known is the Quindio Pass.

In the far south little is known of the country. In Raimondi's Peru, as previously mentioned, the author speaks of El Señor Reyes having gone from Popayan to Pasto, thence across the Cordillera and down the Putumayo, where there has since been es-

tablished a line of steam-boats by which commerce of the Department of Cauca is carried into the Amazon. I have been able to find only general descriptions of Colombia, and of these the leading features have been given. The products of this country find their way to market upon the backs of mules, or by means of boats upon the numerous water-courses. Roads, properly so-called, are not general; they exist merely as mule tracks. Efforts have recently been made to effect an improvement in this respect, and military labor has been used for the purpose. A road suitable for vehicles was opened about a year ago from Bogotá to the Magdalena River. A good road has also been opened from Quibdo to Medellín, touching the rich mining towns along its route.

RAILWAYS.

With the exception of the Panama Railway, 47 miles in length, there are only about 180 miles of line constructed, although many more have been projected, with promises of liberal aid from the Government. A report of Vice-Consul Whelpley, with a map, is added, from which a good idea may be obtained of the roads mentioned. There are several others of importance: the Cucutá railway, in the eastern part of the State, connects San José de Cucutá with the Zulia River at Villamazar, and the Savanna railway joins Bogota and Facatativa on the plain of Bogota. The Panama railway, uniting the two oceans at Colon (Aspinwall) was chartered by the State of New York in 1849 and was opened in 1855. Its immediate purpose was to provide a route to California, but has since become a great commercial highway between western Europe and eastern Asia. It may soon be rivaled, however, by the railways to be constructed in Guatemala and Costa Rica and by the Nicaraguan Canal. It is said that a French-Belgian syndicate is endeavoring to secure a concession from the Government to build a railway from Cartagena to Bogotá, and from Bogotá to Buenaventura, and that the syndicate is ready to complete the road provided the Government will guarantee an annual interest of 5 per cent. upon the capital.

A concession has been granted to a French syndicate for a line from Bogotá to the Orinoco River, and very recently the Department of Bolivar has contracted for the construction of a line from Cartagena to Cucutá, a distance of about 350 miles, with the subvention of a large tract of land for each mile of line constructed. Dr. Núñez, President of the Republic, highly approves a line up the Atrato River to Quibdo, with a branch to Medellín, and thence up the Cauca Valley to Popayan. Connection might be made to Bogota over the Quindio Pass. It would pass through the Choco district, the richest in the world, and would reach a population of 800,000 people. Along its route would be found coal, gold and silver, india rubber, and great quantities of coffee.

The following table shows briefly the railways of Colombia, the first figures showing length of line when finished, the second the portion in actual operation:

Name of railway.	Terminal points.	When finished.	In operation.
		<i>Miles.</i>	<i>Miles.</i>
Panama Railway	Colon to Panama	47	47
Bolivar	Baranquilla to Puerto Belillo	20	20
Cucutá	Cucutá to Villamizar	34	34
La Dorado	Conejo to Honda	30	18
Girardot	Girardot to Bogotá	96	20
Antioquia	Puerto Berrio to Medellín	125	30
Cauca	Buenaventura to Cali	85	12
Santa Marta	Santa Marta to Cienaga	20	20
Santander	Puerto Wilches	75	1
Savanna	Facatativa to Bogotá	24	24
Total .....	.....	.....	226

To these are to be added the projected roads from Cartagena and Bogotá.

Another great scheme has recently been advanced of connecting the Port of Cartagena with the railways of Peru by a line up the Magdalena Valley, traversing the valley of the Amazon, and again crossing the Andes in Peru. A charter has been granted by the legislature of Virginia for the formation of a company to build this road.

An important transportation route has been traced by Dr. Nuñez, President of the Republic, as follows: A railroad to be built from Bogotá to the river Meta, 120 miles; thence by water down the Meta and the Orinoco to the Cassiquiare; along this latter river a railroad to be constructed 240 miles to the river Negro, and thence to the Amazon and its tributaries by water.

COLOMBIA—GEOGRAPHICAL FEATURES.

The official name of the country is the "Republic of Colombia." It is bounded on the north by the Caribbean Sea, on the east by Venezuela and Brazil, on the south by Ecuador, and on the west by the Pacific Ocean, and includes the Isthmus of Panama as far north as Costa Rica. Its southern boundary is near the equator. It is traversed by ranges of the Andes, and is one of the most mountainous countries of the world. The soil of the valleys and plains is rich and productive, and many of the mountains are covered with green even to their summits. The climate varies with the altitude, from the tropical heat of the coast and great river-beds to the cold of perpetual frost.

Bogotá, the capital, contains 75,000 people, and is situated upon an immense productive plain at a height of 8,500 feet above sea-level. The temperature averages 60° above zero, and the climate is salubrious.

CHARACTERISTICS OF THE PEOPLE.

The population of Colombia approaches 4,000,000, and consists of Indians, negroes, half-breeds, and the whites, who are the descendants of the Spanish conquerors. The common people are industrious, simple, hospitable, and of singular probity. Life and property are absolutely safe. Highway robbery would be a novelty, and courtesy to strangers is proverbial. The upper classes are well educated, intelligent, desirous of progress, courteous to strangers, patriotic, and sensible. The Government is a centralized republic. Absolute peace has been maintained since 1885. The property and rights of foreigners are respected and protected. The disposition of the government and of all classes is friendly to foreigners, and with rare exceptions the people are especially inclined to the citizens and institutions of the United States. They like our products, and prefer many of them to those of European countries. (Report by Minister Abbot, of Bogota, September 4, 1889.)

MINES.

Colombia is without doubt rich in mineral resources. The mountainous part of the interior abounds in gold and silver, and in some parts iron is found in considerable quantities, while on the coast, in the region of Santa Marta, copper exists. The working of the iron mines has not proved a success, while the copper has not been attempted. An American mining engineer has lately reported petroleum in very considerable quantities to exist in Tubara, 12 miles from Barranquilla, and within the limits of this consular district. But the principal mines are of gold and silver. Until a few years ago these mines were almost entirely in the hands of the English; but recently there has been an influx of American enterprise, capital, and machinery. It is too early yet to say what will be the outcome of this, but with better communication and facilities for getting the heavy machinery into place there seems to be no reason why these mines will not be worked to advantage.

COLOMBIAN RAILROADS.

The information, obtainable only from Government archives at the capital of the nation—so distant and so unapproachable except with a "golden key"—has rendered it necessary to rely on my own observations and the engineers in charge of construction and management. I inclose a plan of the railroad system, presuming it may lead to a better understanding of the present report. The railroad system of the interior of Colombia is as yet in its embryonic stage and slow in growth.

The capital that might have built railroads and brought remunerative order out of a chaotic realm of natural wealth has been mainly spent in fostering and suppressing political revolutions.

The internal resources of Colombia in precious metals, coal, iron, copper, gums, dye woods, medicinal plants, fibers, and valuable timber should rank her among the most prosperous in the family of republics.

The only road in this consular district in actual service is the Bolivar, between Barranquilla and Salgar, the port for shipment. A branch road to Puerto Colombia, not yet completed, will terminate at the pier now building, where steamers can discharge and receive freight in the future. The railroads to be considered are the Bolivar, Cauca, Jirardot, the Antioquia, and the Dorado. I name the Bolivar first as being the first in importance in its service and aid to foreign commerce, as well as in its perfect management.

A slight digression here may obviate a more prolonged explanation later. The mouth or delta of the Magdalena River, the great commercial artery for eight States of the Republic, is obstructed more or less at all seasons by a shifting bar formed by the sediment of the Magdalena, the Cauca, and their hundreds of tributaries. It is and has been a "marine cemetery," so to speak, for the past forty or fifty years. Vessels enter the river sometimes with from 18 to 20 feet of water on the bar, but a few days later, when cleared for departure, there may be but 9 or 10. Loaded vessels outward bound have waited sixty or seventy days watching for the favorable combination, which seldom occurs, of a fair wind, good depth of water on the bar, a moderate sea, and a reliable pilot to get safely out of this aquatic trap. And it is not an exaggeration to say that one-quarter part of the sailing craft has been lost in exit or entrance. Vessels have been lost on the bar when in tow of a powerful tug-boat and piloted by one of the best experts on the coast. During the past month an American schooner, the *F. G. French*, of New Haven, could not get out on account of the heavy sea on the bar, the prevailing northerly wind, and the uncertainty of the eccentric channel, which may or may not be as it was upon the entrance. A British barkentine has been nearly two months in the same dilemma, and on the 26th ultimo the German brig *Enrique* was lost with a valuable cargo, and two of her officers were drowned, in endeavoring to reach the proper entrance to this delta of the Magdalena; a river 800 miles in navigable length, exclusive of its tributaries, one of the great rivers of the world, but without a light-house, a beacon, or even a buoy to mark its entrance, with no landmarks, no pilots, and a channel as shifting and unstable as the sands that bar the entrance. It was to obviate this peril to life and property that the Bolivar Railroad was constructed.

When the branch to Puerto Colombia is completed steam-ships can lie alongside a pier in smooth water, in a port easy of access, to discharge and receive freight. Sixteen thousand three hundred and seventy-one tons of exports from the interior have been passed over this road for shipment during the year 1887, and 11,848 tons of imports have been delivered at the Barranquilla terminus for the interior trade.

The exports are from the marginal towns and villages along the rivers accessible by river steamers, and only a fractional part of what might be sent to the coast for foreign markets reaches commercial channels through a lack of proper roads and the scarcity of labor. Seven steam-ship lines touch at Salgar to discharge and receive freight, mails, and passengers. German line from Hamburg twice a month; Royal Mail twice a month to and from Southampton; West India and Pacific, English, twice a month from Liverpool; Atlas, English, from New York, twice a month; Harrison, English, Liverpool and New Orleans, twice a month; General Transatlantic, French, twice a month, and the Spanish line twice a month. The passenger traffic over the Bolivar road from and to the Salgar terminus has more than doubled during the past three years.

Should the Dorado and the Antioquia roads be pushed to completion there would be four trains or more daily to Salgar instead of only two, as at present. But of these roads we will speak in the proper routine.

The Bolivar is under American management; is owned by private parties. The rolling stock now in service, of English manufacture, will be replaced as the necessity arises with American. The extension of the branch road to Puerto Colombia, on the northwest side of Salgar Bay, makes the distance from the Barranquilla terminus to the pier eighteen miles. The Salgar terminus will probably be abandoned in the immediate future.

Barranquilla to Salgar wharf is 14 miles, and the necessity for steam-tugs and lighters between Salgar and the shipping will soon be abolished, and probably lower rates of freight will be established to the pier at Puerto Colombia.

The rate for passengers at present is \$5 per capita for first-class from Barranquilla to the shipping, or *vice versa*; \$3 for second class; and freight at the rate of \$2.50 per ton.

The Cauca Railroad.—This road, the construction of which was commenced in 1878 and was to connect with Cali and the west bank of the Cauca River, has its present

terminus at Cardova, 12 miles from Buenaventura. It is now government property; has been surveyed to Cali, but the work has been suspended.

At the time the contract was made the National Government ceded to the grantee 500,000 acres of wild land on both sides of the line in alternate lots of 10,000 hectares each. During the construction of the road, and for five years after its completion, all the material for construction and operation—tools, food, medicine, etc., were to be free of duty, tax, or impost. The State governments of Cauca and Antioquia were joint share-holders, the National Government agreeing to contribute \$3,000,000, one-half of the estimated cost of the road. An exclusive franchise for forty years was guaranteed by the National Government. The passenger tariff for the 70 miles—Buenaventura to Cali—was to be \$5 for first class, \$3 for second class, and 1 cent a pound for freight. For way traffic a differential tariff would be established within the specified limits.

An integral and important part of the contract was the construction of a pier at the port of Buenaventura to accommodate loaded trains and ships drawing 20 feet of water. As far as can be learned from unofficial sources, failure in payment of promised subsidies and revolutionary troubles have prevented the continuance of the work. The grantee on the one part and the Government on the other made an amicable adjustment, and the line as far as completed (12 miles) became the property of the government of Cauca and the nation, and its future is a matter of vague uncertainty.

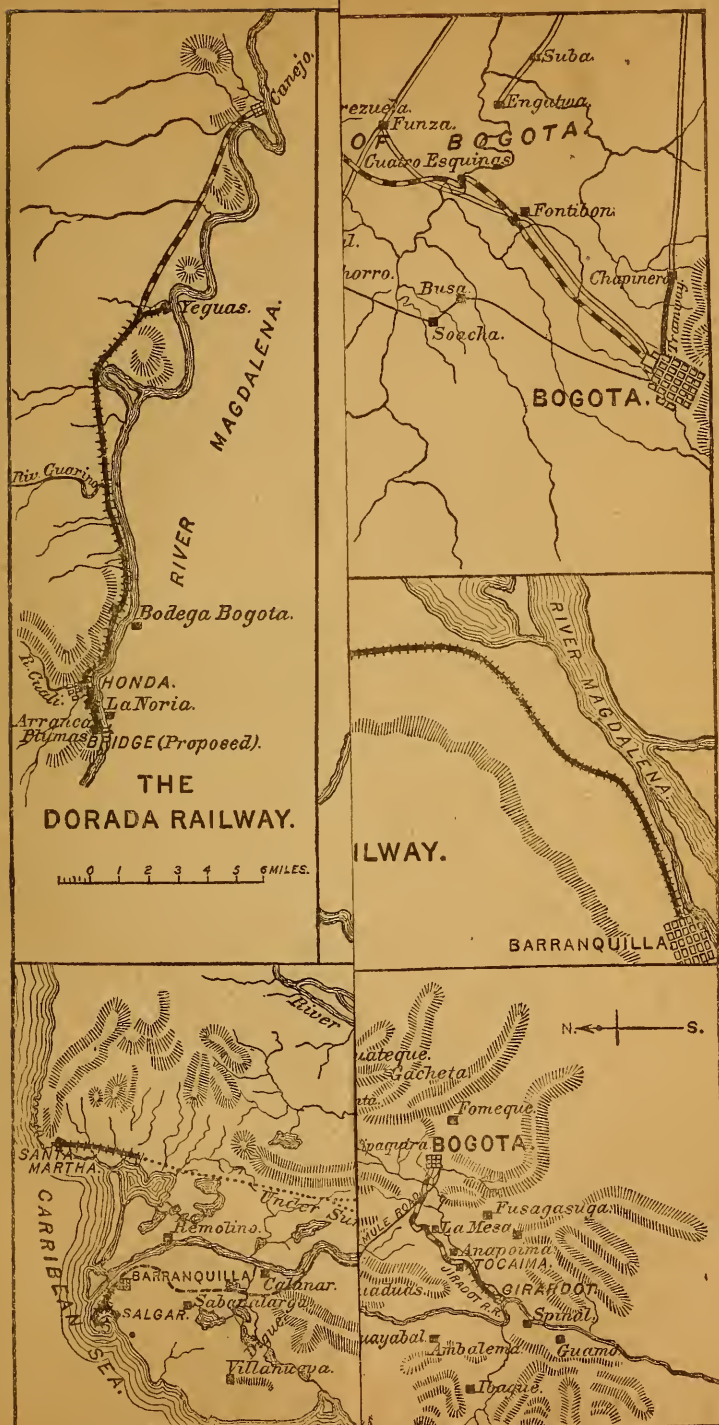
The Jirardot Railroad.—By reference to the accompanying plan it will be seen that this line has been completed to Portillo, 12 miles. The line has been surveyed to Bogotá, a distance of about 80 miles. It is a Government enterprise, and presents engineering difficulties of no ordinary character. The work is progressing slowly, but owing to the topographical features of the route, gradients will be necessary at several points on the line of survey; and it is considered doubtful whether the road when completed will ever pay its running expenses. Passengers coming up the river en route for Bogotá prefer to leave the river steamer at Yeguas, taking the Dorado Railroad to Honda; then they cross the river and proceed by the old mule road, consecrated by a century of usage. Comfortable hotels, in picturesque locations, break the journey into easy stages, and whether for business or pleasure the majority of travelers who have had a surfeit of river travel between Barranquilla and Yeguas do not care to spend two or three days more on a small steamer on the Upper Magdalena for the doubtful pleasure of skirting mountain spurs and crossing ravines on trestle-work among the Cordilleras. Remarks on the future progress and prospects of this line would be premature; its history is a subject for the future. (Gauge 3 feet, rail 30 pounds, section completed in 1884.)

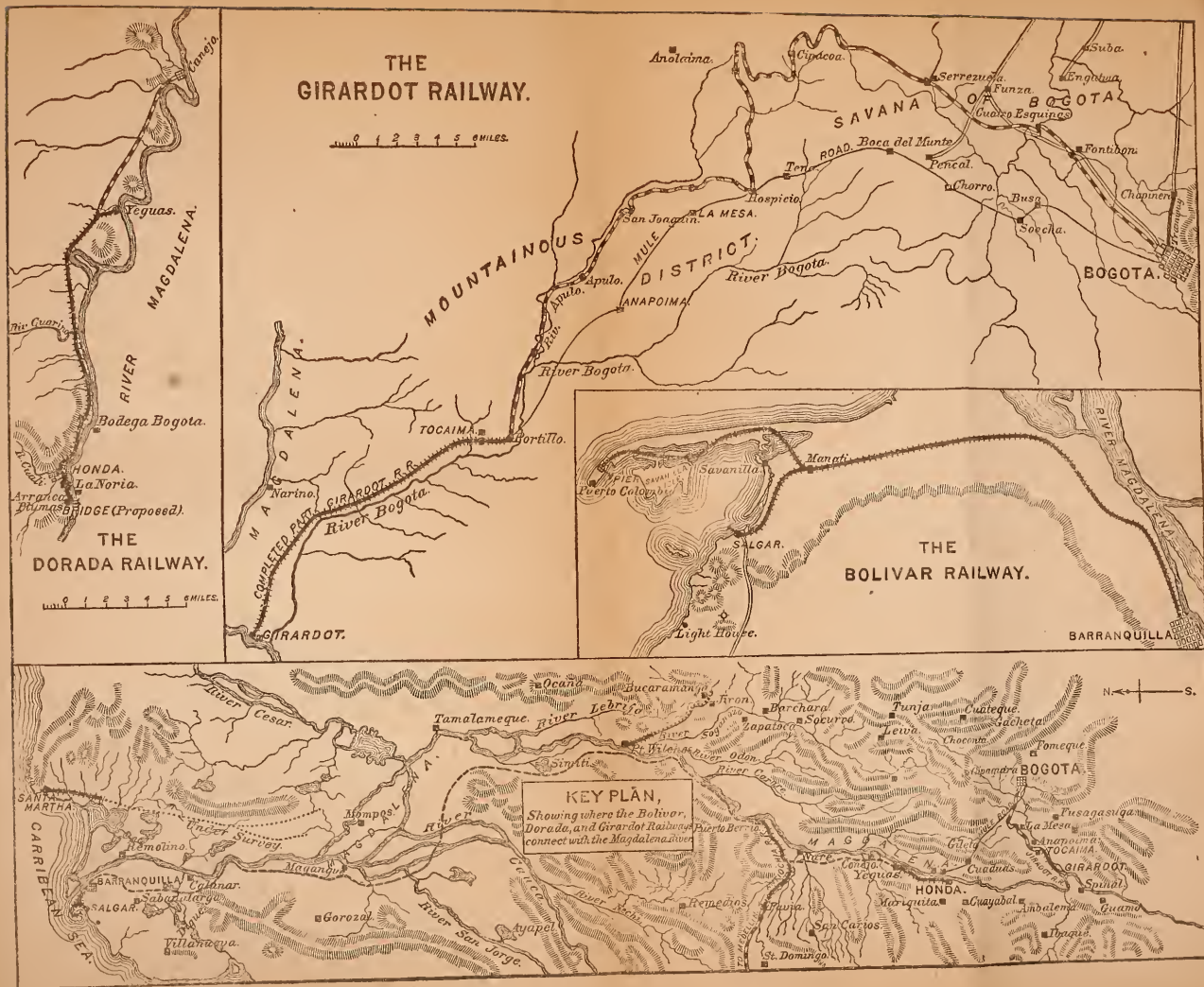
The Antioquia Railroad.—From Puerto Berrio to Medellin, 125 miles, has been completed to Pavis, 30 miles from Puerto Berrio. The first contract for this road was signed in February, 1874, modified on the 4th of May following, and in July, 1876, a new contract was made for the termination of the line at Barbosa, a distance of 100 miles from Puerto Berrio. This also is a road of heavy gradients. The State of Antioquia was to contribute at the rate of \$17,700 per mile, but not to exceed a total of \$2,000,000, upon which basis State bonds were issued. The State of Antioquia, as share-holders of one-third part of the enterprise, owned the right to one-third of its proceeds. The grant was for the period of fifty-five years, with exclusive privilege for thirty years, beginning from the 1st of March, 1883. The same immunities and privileges in regard to duties and taxes as specified for the Cauca road were also conceded for the Antioquia. The maximum rates of fare and freight were: For first-class passengers, 12 cents per mile; second class, 8 cents; third class, 4 cents. Imports, 30 cents per ton per mile; exports, 25 cents, and coffee and tobacco 15 cents a mile.

With this brief summary of the principal features of the grant it may not be amiss to mention some of the difficulties.

There are to be 22 bridges, 115 trestles, 58 culverts, 4,135,288 cubic yards of earth-work, and 177,242 cubic yards of retaining walls. The central Cordillera to be passed at its greatest depression, 5,177 feet above sea-level, "requires the adoption of 6 per cent. gradient." But in spite of the difficulties to be overcome, the original design of the projector, the grand project of joining the Magdalena Valley to the Pacific coast by the union of the Cauca and the Antioquia roads would open up a realm of wealth. There are five hundred and eighty mines of gold or silver constantly worked, a large number without machinery, within those mountain barriers, only accessible by bridle-paths, rendering the transportation of proper tools and machinery impossible. On some of the interior rivers marble in inexhaustible quantities could be quarried, especially on the Claro and Nare.

Coal belts have been discovered, alum, sodium, calcium, manganese, cobalt, lead, zinc, mercury, arsenic, and platinum have been reported upon; agates, jaspers, and variegated marbles are found in the mountains. The population of the more mountainous regions of Colombia are the bone and sinew of the nation—hardy, persevering, and industrious—good herdsmen, agriculturists, or foresters in times of peace, and brave and reliable soldiers in war.





Sugar, cotton, corn, rice, wheat, tobacco, cocoa, coffee, aniseed, are some of the productions awaiting an outlet from the valleys and table-lands of the interior to navigable waters. The space to which this report should be limited prevents a more detailed description of domestic and forest products intended to be reached by the Antioquia Railroad.

The Dorada Railroad.—It is necessary to refer to the Magdalena River, especially to that portion of the river between Honda and Yeguas, unnavigable when the water is low on account of the rocks, shoals, and rapids in that section of the river.

In 1872 the State of Tolima granted an exclusive privilege for constructing a railroad between the waters of the Lower Magdalena, at Caracoli, and the Upper Magdalena, at Honda, and a bridge across the river at Honda. A series of rapids and falls at this place forms a barrier between the upper and lower rivers.

The National Government guaranteed, for twenty-five years, 7 per cent. interest on the sum of £42,000 sterling—the estimated cost of the work. The preliminary surveys elicited adverse reports. That the capital so guaranteed was insufficient for the purpose, and that such a short line would be expensive in working, especially in competition with the time-honored mule train, that would still absorb a good portion of the traffic on the 3 miles of road. Navigation being difficult and dangerous for at least 30 miles below Honda, application was made for and a new concession granted with exclusive privileges. English capital could not be found for the original plan, as the cost was estimated at £16,600 sterling per mile. Taken by itself this seemed excessive, but in conjunction with 27 miles on which the cost would be exceptionally low, the average cost did not seem so great. The projected plan for the extra concession was to connect a port below El Dorado with Honda, and the bridge to cross the river at that place—about 30 miles along that part of the river most obstructed by shoals and rapids. The road has been completed to Yeguas, about 18 miles. Owing to revolutionary disturbances, additional time was granted (to August, 1885) to extend the road to Conejo.

The National Government grants a subsidy of \$5,833 per mile, as completed, and an exclusive privilege for eighty years, at which period it is to become the property of the nation. Seven per cent. annual interest is allowed for any delay in the payment of the promised subsidy. The road between Caracoli, below Honda and La Noria, above Honda, has been in service since June 1, 1882, effectually uniting passenger and freight traffic between the waters of the Lower and the Upper Magdalena. This, the most difficult part of the road, cost \$64,000, and the engineers have estimated the remainder of the road at a cost of \$16,000 per mile.

The bridge across the river at Honda will probably be built in the future, but as yet nothing has been done towards its construction. Some five years ago a Colombian railroad enterprise was inaugurated to construct a railroad from Puerto Wilches, on the eastern bank of the Magdalena River, to follow the valley of the Sogomosa River and reach Bucaramanga. The line was surveyed and a short section of track, less than a mile, was laid.

Both the State and the National Government contributed aid to the project. Presumably the revolution of 1884-'85 caused its suspension. Rumors of a new contract are current, but no official data has come to hand in regard to its prospects. Before closing this report mention should be made of a projected railroad scheme to connect Santa Marta with one of the up-river ports. There are 20 miles of road completed from Santa Marta to the Cienega station, and the line is being surveyed, it is reported, to Banco. As a large section of the line south of the Cienegas is on alluvial lands subject to overflow, and the main portion is through swamp jungle and across various lagoons and water-courses of promising difficulties, it would be premature to express any positive opinion as to its future. There are said to be copper mines in course of development within reach of the line that may be largely remunerative in the future, but it is doubtful whether profits derived solely from such a course would be able to cover the interest on sufficient capital to build such a road—through a district very sparsely populated—and in competition with the steam-boat lines. (Report by S. M. Whelpley, United States vice-consul, Barranquilla, March 10, 1888.)

VENEZUELA.

The total area of the Republic, in its official statistics, is computed at 1,639,398 square kilometers (of which 2.59, or nearly 2½, make 1 square mile, English); of this, the section south of the Orinoco River and its great tributary, the Apure, and the delta of the former, contain the State of Bolivar and the territories of Yuruary, Caura, Alto Orinoco, and Alto Amazonas, with a collective area of 1,044,294 square kilometers. In 1883 the entire population of this vast region was but 108,352 souls. As 10,861 were in the single city of Ciudad Bolivar, and at least as many in the gold regions near it, and many thousands of the subjugated but scarcely civilized Indian tribes were included in the census, the remainder must constitute an exceedingly sparse

population, so much so that the population of Caura on 58,458 square kilometers seems not to have been counted at all, but included in that of the State of Bolivar. It is difficult to estimate the area and population north of the Orinoco and Apure. The greater mass of the population lies upon the comparatively narrow rim of the Republic in the elevated regions bordering on the Caribbean Sea and Lake Maracaibo, which extends southwardly to the slopes of the Andes.

The obviously leading thoughts of both the rulers and the business men of Venezuela are to connect its populous and productive uplands with the Caribbean sea-ports by railways. Those uplands occupy precisely the relations to those ports which the eastern ports of the Mississippi Valley do to the Atlantic sea-board except that the lines of communication between the former must be from north to south. A railway is already in successful operation from La Guayra to Caracas and a few miles beyond. Mr. Bird, United States consul at the former place, suggests in his report of May 1, 1884, that it should be extended through the mountains southwardly to the Orinoco valley. From Puerto Cabello a railway is in course of construction southwardly to Valencia, and the late very progressive ruler of Venezuela, General Guzman Blanco, made Government contracts for the construction of a railway from Grita in the heart of the mountains in the State of Los Andes, down to Lake Maracaibo. After the successes of our own engineers in overcoming the obstacles of our Rocky Mountains, the Andes in Peru, and even in the short line which has been built in Venezuela itself around the 8,000 feet high mountain between La Guayra and Caracas and of European engineers in Switzerland and India, it is a question only of energy and capital how long it will be before all the really salubrious parts of Venezuela will be connected by railways with the ports on the Caribbean Sea.*

The following is a brief statement of railroad building in Venezuela taken from the Statistical Annuary of Venezuela for 1887:

Railways open to traffic.

	Miles.
From Caracas to La Guayra.....	23.6
Tucacas to Aroa	55.8
La Ceiba to Sabana Mendoza	25.1
Caracas to El Valle.....	3.4
Marquetia to Macuto	4.3
Carenero to Rio Chico.....	19.8
Caracas to Petare.....	6.2
Caracas to Antimano.....	5.5
	<hr/> 143.8

Railways in construction.

From Puerto Cabello to Valencia.....	33.5
Petare to Santa Lucia.....	27.3
Santa Cruz to La Fria.....	55.8
Orinoco to Yuruari.....	124.0
Barcelona to the Coal Mines.....	11.8
	<hr/> 252.4

Lines contracted and being studied.

From Caracas to La Victoria.....	62.0
Petare to Ciudad Bolivar (through Guarenas, Guatire, Rio Chico, etc.)..	449.5
Puerto Cabello to Zamora	186.0
Maracaibo to Cojoro	96.1
Coro to La Vela.....	7.4
San Cristobal to Uribante	49.6
La Luz to Barquisimeto, Tocuyo, and Trujillo	217.0
Merida to Mucuchies and Bobures	161.2
	<hr/> 1,228.8

A French company has recently acquired a concession to build a railway from San Carlos del Zulia to Merida, and to operate a line of steamers in connection with it between San Carlos on the Escalante and Maracaibo.

Most of these railways have obtained guarantees from the Government of 7 per cent. interest upon their capital proportionate to the cost of the road, to continue for ninety-

* Report of South American Commission.

nine years; and some have a further grant of authority to work all mines within a certain distance of their lines. These railways have all been constructed by British capital.

The statistical annuary of Venezuela for 1889 makes the following statement: There are completed to the present time (July 1, 1889) 316 kilometers (196 miles), of which 37 kilometers (23 miles) are from Caracas to La Guayra; 8 kilometers (4.9 miles), Marquetia and Macuto; 5 kilometers (3.1 miles), Caracas and El Valle; 54 kilometers (33.5 miles), Puerto Cabello to Valencia; 90 kilometers (55.8 miles), Tucacas and mines of Aroa; 35 kilometers (21.7 miles), La Ceiba and Sabana de Mendoza; 19 kilometers (11.8 miles), Barcelona and Bay of Guanta; 33 kilometers (20.5 miles), Carenero to San José; 20 kilometers (12.4 miles) are in the Central Railroad; 15 kilometers (9.3 miles) in the great railroad of Venezuela. The Central is to be 240 kilometers (144.8 miles) long from Caracas to Valencia. The great railway will be 300 kilometers (186 miles), and will connect Caracas with San Carlos in the state of Zamora.

RAILROADS IN VENEZUELA.

On the 16th ultimo the railroad between this port and Valencia was formally opened by President Hermogenes Lopez.

The *Puerto Cabello and Valencia Railroad*, as it is called, was commenced a little more than two years ago by Perry, Caruthers & Co., of London, contractors. On the 1st of April it will pass into the hands of the company, of which Mr. W. Mallon is general manager. The gauge is 3 feet 6 inches—6 inches wider than the track between La Guayra and Caracas.

The distance is 54 kilometers. Valencia, the southern terminus, is a city of some 40,000 people, and is situated in the heart of one of the richest agricultural regions in the country. In fact, it is admitted that the States of Carabobo and Lara are the first in agricultural development in the entire republic. Another railway, from Caracas to Valencia, about 300 kilometers in length, is in process of construction by an English company. It is reported that Krupp, of Krupp gun fame, has a concession for still another railway between the two cities mentioned above.

Another railway is projected between this port and Aurare, which is not far from the Apure River, one of the principal tributaries of the Orinoco on the north. This is also about 300 kilometers in length.

There is still another line of railway—already commenced—in this consular district, extending from *La Luz* to *Barquisimeto*, a distance of 85 kilometers.

These lines will open up a great agricultural and mineral district, facilitating greatly the movement of merchandise to this port, and will doubtless build up and develop the country's resources more largely, and materially improve and advance the interests of the people throughout the entire country, and will be the best means of placing the Government on a much more stable basis than it has ever had. (Report by David M. Burke, United States consul, Puerto Cabello, March 15, 1888.)

Consul Plumacher, under date of February 5, 1889, reports that the *Credit Mobilier* of Paris has commenced preliminary work upon a road from La Fria to San Cristobal. The chief engineer, M. Dubosques, died from yellow fever almost upon arrival at La Fria, which will probably delay operations. Another road from the city of Merida to the lake coast is about to be begun.

A railway from Santa Barbara, at the southern extremity of the lake to San Cristobal will be commenced within a month, the contractors being a French company. No railroad in Venezuela will excel this in importance, and it has been talked about for many years, but there is every reason to believe that it will now be vigorously pushed through to completion. (Report by E. H. Plumacher, United States consul, Maracaibo, February 20, 1889.)

Referring to previous dispatches from this office respecting the projected railway from Lake Maracaibo to the city of Merida, I now have the honor to report that the work has already commenced, the contractors being a company formed in Paris with the title of "*Compagnie Francaise des Chemins de fer Venezueliens.*"

The original concession was granted to the Duke of Morny, son-in-law of General Guzman Blanco, who transferred his privileges to the above mentioned company. The engineer in chief, with a complete staff and a large amount of material, arrived in this city last month, and the preliminary work has already begun. When the terms of the contract became generally known, however, there immediately arose a strong opposition on the part of the people who, although fully appreciating the incalculable advantages of direct railway communication between Lake Maracaibo and the rich coffee regions of the Cordillera, were very unfavorably impressed with the extraordinarily exceptional privileges granted to the contractors.

I inclose translation which appeared in the *Fonografo*, a leading Maracaibo newspaper, giving a tolerably accurate idea of the general feeling of the people. It is true that all railways constructed in Venezuela have been favored with a guaranty clause in the contracts, assuring to the contractors an interest of 7 per cent. upon the capital invested, but it is complained in this case that the estimate of the cost of construction is excessive. Of the 170 kilometers comprised in the line the first 60 have been estimated to cost \$60,000 each and the remaining 110 \$70,000 each.

It must be acknowledged that the conditions topographically and otherwise are peculiar, as one part of the road will pass through swamps and morasses and another will necessitate heavy rock work in order to climb the Cordillera; but even taking all this into consideration it is to be regretted that American capitalists did not take this enterprise in hand. For years this consulate has called attention to its importance and to other opportunities for successful investments, but these suggestions have been utilized almost invariably by foreigners and not by Americans, for whose knowledge and benefit they were intended.

In this consular district there is now one railway in active and successful operation (that of La Ceiba), which will probably soon be extended to Valera by a French company. The Merida road is French property, and there is still another about to be constructed from one of the tributaries of the lake to the city of San Cristobal, also under a French contract. We are thus losing constantly excellent opportunities of augmenting our commercial prestige in this Republic. The French, particularly, have recently shown much activity in Venezuelan enterprises, and the only coal deposit where serious efforts have been made for the extraction of the mineral is granted to a Paris company.

In this connection I beg to state, as indicative of the interest taken by Europeans in these matters, that my report of February 3, 1888, referring to commercial and industrial matters in this consular district, published by the Department, attracted the attention of the British Government, and the foreign minister recently sent a personal cablegram to the British consul at this port, requiring detailed information respecting the petroleum deposits referred to at length in my above mentioned dispatch.

It would be gratifying to me were our own people to take advantage of these numerous opportunities for the enterprises of railways, coal mines, petroleum deposits, etc., but as it has often been mentioned in consular reports from various parts of South America the information thus furnished for the benefit of the capitalists, merchants, manufacturers, and exporters of the United States is acted upon more by Europeans than by our own people.

To return, however, to the railway, which is the immediate subject of this dispatch, I shall endeavor to keep the Department informed as to its progress and chances of completion. There are other details in connection with the enterprise, such as the alleged exclusive privilege of steam navigation on the lake, which are not yet sufficiently clearly defined for me to inform the Department with accuracy, but I think I can safely say that such a monopoly can not possibly exist, especially as it would conflict directly with the interests of an American company chartered and incorporated in New York. (Report by E. H. Plumacher, consul, Maracaibo, March 8, 1889.)

I have the honor to furnish the Department with further details respecting the progress of the railway from the lake coast to the city of Merida, as referred to in my dispatch No. 374, of March 4, last.

In January last the chief engineer, Mr. William H. Burr, an Englishman, and a staff of assistants, principally Americans engaged in New York, together with an English physician, arrived at Maracaibo and began the organization of the work. The circumstances attendant upon the concession for this enterprise were somewhat peculiar, and a brief résumé thereof will be of interest to those of our own countrymen who may contemplate similar enterprises in this Republic.

When the question of a railway from the lake shore to Merida was first seriously discussed, Guzman Blanco was then supreme in Venezuela and in actual possession of the presidency.

His son-in-law, the Duke de Morny, visited this country immediately after his marriage, and was at once granted various valuable concessions, among them one for the construction of a railway from San Carlos, a river port at the extreme south of Lake Maracaibo, to the city of Merida.

This concession was granted by the executive power, needing only the approval of Congress to render it valid. As for nearly twenty years, however, the will of Guzman had been the law of the land, and as the national legislature had never hesitated to approve all of his acts without discussion, it was taken for granted that this railway contract of de Morny would be at once confirmed, although its terms were highly disadvantageous to the country and proportionately favorable to the concessionaire.

In a previous dispatch I pointed out the just grounds of the people at large against the issue of a contract based upon such unequal terms, and inclosed newspaper arti-

cles referring to the matter, in which both Guzman and his son-in-law were severely handled. However, as time elapsed the reaction against the dictator took place, and the present incumbent, Dr. Rojas Paul, succeeded to the Presidency. Congress met, and most of the contracts made by General Guzman Blanco were disapproved, but this particular concession for the Merida road was not submitted, its supporters fearing, no doubt, that in the existing temper of Congress and on account of the force of public opinion it would meet a like fate.

In the meantime De Morny had formed a company in Paris, he and his father-in-law, it is said, being heavy stockholders, and this company contracted for the construction of the road with the *Compagnie de Fives-Lille*, a French firm whose operations extend over the greater part of the civilized world. This latter company, it will be understood, are merely the constructors, having engaged to build the road for a stipulated sum, and have nothing whatever to do with questions of concessions or ownership.

It will be noted from the foregoing, however, that the contract is not yet approved, and if, in February next, when the Venezuelan Congress meets, it should be thrown out, then the company formed by the Duke de Morny will be obliged either to suspend operations after having already expended a large amount of money, or to continue at their own risk without the Government guaranty of 7 per cent. upon outlay, which is the backbone of the concession.

Of course it is impossible to prophecy what Congress may do, but it is certain that if the contract should be approved it will be greatly modified, as the estimated cost of the road, as accepted by Guzman Blanco, and upon which the 7 per cent. guaranty must be given by this Government, is scandalously in excess of even the most generous computation.

From the very beginning this project has been viewed but coldly by the Venezuelans, and with reason. As the traffic between Merida and Maracaibo is comparatively insignificant, the former city being situated in the poorest part of the Cordillera, it is difficult to see how a fair interest above running expenses can possibly be obtained upon the capital invested, and for many years, should the concession be finally approved, the people of this country would be taxed to maintain a line which really offers but few advantages, and the whole affair has borne such an unmistakable odor of a job in favor of the contractor that the only friends of the project are the few who for various reasons may be directly interested.

It is true that a railway from Lake Maracaibo to the rich coffee regions of the Cordillera is a necessity, but Merida is the worst possible point that could have been selected, and the projected road from San Cristobal, the seat of one of our consular agencies, to which I will have the honor to refer in a subsequent report, will fill all the present needs of the situation.

Notwithstanding the unpopularity of the Merida contract and its lack of final approval by Congress, it was determined to begin work and trust to the influence of Guzman Blanco to straighten out all difficulties, and in January last, as previously stated, Chief Engineer Burr arrived as representative of the construction company, and it is to the result, or rather want of result, of the operations of the past ten months that I desire to call attention.

These details may not appear of great interest, but will be appreciated by railroad men at home who may some time be engaged in similar enterprises in this country, and, as one of the results of the Pan-American Congress will be to call particular attention to the South American Republics and the fields there offered for the enterprise and capital of our people, it seems to be especially appropriate just now to explain clearly the industrial situation.

The history of the Merida road, from the beginning of the work up to the present, is simply a record of mistakes in administration and management.

The starting-point of the railway is at the town of Santa Barbara, situated on the river Escalante, 30 miles from its mouth, which latter is at the southern extremity of the lake, about 100 miles from Maracaibo.

The chief engineer established his headquarters in this city, where he has remained almost constantly, exercising no personal supervision over the work.

For convenience of survey the line was divided into two sections, the first from Santa Barbara to the foot of the mountains, and the second from this latter point to Merida.

The first section, comprising an almost level plain, was placed in charge of Mr. J. T. McGauran, a well-known New York engineer, and the second under control of Mr. C. Corner, with a corps of American assistants. The personnel of the staff appeared to leave nothing to be desired, but nevertheless ten months have elapsed, a large amount of money has been expended, and comparatively nothing done. Want of personal inspection on the part of the chief engineer may have been at the root of the matter, as, without being actually present at times in the field, it has naturally been impossible for him to keep thoroughly posted as to the necessities of the situa-

tion, and enterprise, as far as the practical part is concerned, may be considered acephalous.

This had its natural result, dissatisfaction ensued among the assistants, several of the American engineers having presented complaints at this consulate for non-fulfillment of details of contracts made with them in the United States and for other reasons, many of these complaints being, no doubt, well-founded.

The work progressed very slowly and unsatisfactorily, and to-day, more than ten months after the initiation of the surveys, they are not yet completed, although the entire distance is but 30 leagues. It will be remembered, moreover, that this is a climate of perpetual summer, where inclemency of weather is not a factor in the consideration of obstacles. It will seem almost incredible to our railroad people in the United States that, with ample funds and competent engineers, ten months have not sufficed to complete the survey of less than 100 miles, one-half of that distance being a level plain.

In the mean time the company in France has dispatched many ship-loads of rails, locomotives, etc., expecting that at least the first section would be entirely finished and trains running before now. The fault has been want of administrative judgment, and the working staff as first organized has now gone to pieces, and within the past few days a large party of engineers (all French) have arrived to replace vacancies. Mr. Burr, as far as is now known, still remains as chief engineer, although some of his former subordinates have made complaints against him to headquarters at Paris. It is true that in this country the administration is much more difficult than at home, but in the matter of the Merida road there has been such an absence of good judgment and administrative tact as to serve as a warning to impresarios in the future.

Lake Maracaibo is fed by about one hundred and fifty rivers, each one extending far inland, making the circumference of the lake an almost continuous swamp, with occasional stretches of solid ground between the river systems. It will therefore be readily seen that a railway from the Cordillera could not possibly arrive at the city of Maracaibo except by an enormous expenditure of money, far in excess of the most costly works of a similar character in any part of the world. A convenient port on one of the lake tributaries must be selected as a terminus, and from there steamers must connect with Maracaibo. This naturally necessitates a system of lake and river navigation in connection with the railway, and, recognizing this fact, the contractor was ill-advised enough to have a clause placed in the concession giving him the exclusive right of lake navigation. The absurdity of this is evident when it is considered that hundreds of sailing vessels have for generations traversed the lake and rivers, giving employment to thousands of people, and that there already exist various steam-ship lines, some under American charter. Appreciating this, the company formed by de Morny hastened to explain that this exclusive privilege only extended to steam navigation, which is also a ridiculous assumption, as for years American companies organized in New York and doing business under Venezuelan license have been actively engaged in the navigation of the lake and its rivers, and their exclusion would now bring about an international question.

It is much to be regretted that our own countrymen have not taken part in railway matters in this Republic, and the general opinion, as freely expressed in this section, is to the effect that if the Merida road, with all its natural drawbacks and unpopularity, had been from the first under American control the result to-day would be very different.

As the case now stands, time and money have been wasted, the prestige of the constructors has received a severe blow, and the only thing tangible to show for so many months of work and such a large outlay is an incomplete survey and a few hundred yards of track laid at the village of Santa Barbara. It is expected that the recent arrival of the new staff from France may bring order out of chaos; but a very different system must be adopted, and even should the survey and construction now proceed satisfactorily, yet it is doubtful whether Congress, in its session of February next, will approve the concession, even under modified and more reasonable conditions. (Report by E. H. Plumacher. U. S. Consul, Maracaibo, December 6, 1889.)

ECUADOR.

This country may be said to consist of three parts—the western slope, the Quito Valley, and the Napo region, so formed by the two Cordilleras of the Andes traversing the country from north to south. The Quito Valley having a general elevation of 7,000 feet is separated into three parts by lateral ridges, called sierras; the first, on the south, contains the cities of Loja and Cuenca and is about 50 miles in length; the middle basin, about 130 miles in length, is rather barren, and has the cities of Riobamba, Ambato, and Tacunga; the third and most northerly, in which is situated the city of Quito, the capital, is rich and fertile.

The Napo region is a dense primeval forest, broken only by rivers. There is not a good road in the whole province, and it is very thinly inhabited. The Andes slope rapidly both in this region and on the western coast.

The river system consists of the Napo, Pastassa and Santiago, tributaries of the Marañon, and the Mira, Esmeraldas, and the Guayaquil flowing westward into the Pacific. The waters of the Quito Valley proper flow into the Pacific, while at Ambato the Pastassa flows into the Amazon.

The rainy season on the eastern slope is from March to November, with the greatest rain in April. The mean annual rain-fall at Quito is 70 inches, while at Charleston, S. C., it is only 46 inches, and at New York 42 inches. The mean annual temperature of Quito is 58.8°, the extremes in a year being 45° and 70°.

During this season the rains are frequent, giving rise to the great rivers, the Napo, the Pastassa, and their many tributaries flowing into the Amazon. The Marañon at Nauta is three-fourths of a mile wide and flows at a rate of 3½ miles an hour. The Putumayo, which rises in Colombia and enters the Amazon below the Napo, has several mouths, one of which is a mile in width.

The population of Ecuador is given at about 1,000,000, of which the capital, Quito, has about 70,000, Cuenca, 30,000; Guayaquil, 40,000. The greater portion of the whole population is on the central plateau.

The western slope is mountainous, the coast having several harbors, the great port of entry being Guayaquil, whence merchandise is carried by rail or mules to the interior. There is one main road to the plateau which in the rainy season is very difficult of passage, but along the plateau there is a good road. Several passages from the central plateau through the mountains have been followed to the headwaters of the Amazon, one down the Pastassa River is difficult because of the rapids, another by way of Loja to the Marañon is also difficult. There is a road to Macas which is little used. The best route is probably from Quito to Papallacta, about 40 miles east-southeast from Quito, across an extreme elevation of about 14,000 feet, by a road just passable for horses, thence to Napo village, Archidona and down the Napo River. Papallacta lies on the western edge of the great forest. The old maps show the great Spanish high road traversing Ecuador from Colombia on the north to Peru on the south, touching all the important towns in the central plateau.

RAILWAYS.

In the report of the South American Commission it is said that "Finally the President thought the building of a railroad from Guayaquil to Quito would be a remunerative enterprise. The commerce of the country passes through Guayaquil, and it is the most advantageous point from which the interior can be reached. The road would be about 160 or 170 miles in length from the head of navigation on the Guayas River, and he estimated its cost at not over \$4,000,000 in gold."

Communication between Quito and the Amazon is not difficult, and if opened up would no doubt make Quito a thriving city.

The Yaguache Railway, from Yaguache to Chimbo, 40 miles, with an extension from Chimbo to Sibambe, 50 miles, almost completed. This is the only railroad in operation in Ecuador, and is owned by the Government. The construction was begun in 1872 and the line opened to Chimbo in 1877; the original intention was to build to Quito on the north and Guayaquil on the south. A concession has recently been made for the construction of the line eastward from Yaguache to Duran, 14 miles, a point nearly opposite Guayaquil on the other side of the river.

A telegraph line from Guayaquil to Quito over this route was completed in August, 1884.

Other concessions have been granted for railways in Ecuador as follows: From the port of San Lorenzo to Ibarra, about 30 leagues, or 90 miles, the concession being for ninety-nine years, when the line reverts to the Government, and 6 per cent. being

guaranteed ; from Machala to Azogue and Cuenca ; from Manabi (or Bahia) to Quito ; and in the Province of Rios from Baba to Vinces and Pueblo Viejo.

A survey is reported to have been made on the Bahia-Quito line.

RAILWAY PROJECTS IN ECUADOR.

In 1885 the Government made a contract for the construction of a section of railway from Chimbo to Sibambe, 50 miles in length, an extension of a railroad built some fifteen years ago by the Government from Yaguache, the head of navigation of a river of the same name, to Chimbo. For the construction of this extension the Government granted to the contractor, for twelve years, the income derived by it from the monopoly of the sale of salt in the Republic, amounting to 200,000 sucres annually, and the right to the use for his own benefit of the whole line for twenty-five years, he agreeing to complete the extension in four years. This year the contractor assigned his contract to a company of this city, known as the Railway and Public Works Company, which is now engaged in grading the roadway. Only a few miles have been graded so far. The Government has no share in the management of any part of the road. The direction from Yaguache to Chimbo is north, and from Chimbo to Sibambe east. From Yaguache, 25 miles northeast of this city, to Chimbo, the road passes through a fertile country, only sparsely populated, the chief products of which are sugar and rice. Several large sugar estates and a few small cocoa plantations are on the line of the road. The population is almost exclusively agricultural. From Chimbo to Sibambe, the terminal point contracted for, the road will pass through a mountainous region for the greater part of the distance, reaching at Sibambe an elevation of 7,500 feet. The country to be tapped by this section produces cattle, wheat, barley, and in fact most of the cereals and vegetables of the temperate zones, but the population is sparse, composed mostly of Indians, who are very poor and ignorant, though peaceable and laborious. The land is fertile and capable of yielding abundant harvests.

Last year the Government granted a concession for a railway from Duran, a point across the river and nearly opposite Guayaquil, to Yaguache, 14 miles west by land, to connect at that place with the road to Chimbo. For this the contractor is to receive from the Government 20,000 sucres a mile, and to enjoy the free use of the road for twenty years, at the expiration of which term it is to become the property of the Government ; until then the Government will have no share in its management. Work has been progressing for the past year, and it is expected that the road will be open for traffic in December next. It runs through a low, flat region of country, devoted principally to the pasture of cattle and abounding in tropical fruits. The population is sparse and composed mainly of Cholos, a mixture of white and Indian, who bring the vegetable and fruit supplies to this city.

With the completion of the two lines or sections there will be a railroad of 96 miles, connecting Guayaquil and Sibambe (the latter a town of 2,000 or 3,000 inhabitants), and from thence there is a wagon road north to Quito, but it is much out of repair, and no wagon, I believe, has ever passed over it. There is some remote probability of an attempt, after the line reaches Sibambe, to continue the railroad to Quito.

A concession and subvention were last year granted for a railroad from Bahia de Carequez, a port on the Pacific, to Quito, about 280 miles east of the proposed line, the person undertaking to build the road to receive the net income of the custom-houses at Bahia and Monta, amounting to 70,000 sucres a year, for ninety-nine years, and to have the use of the road for the same period. The Government is to have no share in its management. For some 30 miles from Bahia eastward the projected road is through a level, flat country. Afterwards it enters the Andes and passes through a mountainous region, almost uninhabited. Some little grading has been done near Bahia, but it is thought to be a very difficult and costly enterprise and one not likely to be carried to a successful termination, with the wholly inadequate means at the command of the contractor. (Report by Owen McGarr, U. S. consul-general, Guayaquil, Ecuador, July 27, 1888.)

PERU.

GEOGRAPHICAL FEATURES.

Peru is perhaps the best known of all South American countries. It is the seat of the ancient civilization of the Incas and contains some of the famous silver mines worked for so many centuries. It is divided by its mountains into three regions—the coast, the central plateau, and the Amazon region. The coast line of Peru presents an almost unbroken front of arid ridges of sand or bleak ranges of rock running some-

times to the sea, yet behind those ridges and between those bare mountains are valleys of unparalleled fertility, through which wind streams of water fed by the unfailing snows of the highest peaks, streams whose volumes and force abate as they reach the wall of sand toward the sea and in which they are finally lost. There are few rivers of the multitude along the western slope of the Cordillera that find their way unbarred by sand to the ocean. In these valleys the products of the field are exuberant and varied, corn, cotton, sugar-cane, alfalfa, rice, with grapes, apples, pears, peaches, and other fruits abound. The maturity of the crops depend upon the time of sowing and planting, so that they may be arranged to mature consecutively, thus keeping the mills always at work.

The mineral resources of Peru are very abundant. Silver is found throughout her territory, also gold, coal, copper, and many other minerals.

The country is very favorable for the raising of wool, and it is only necessary to mention the guano and nitrate deposits to complete the list of the almost unlimited resources of this wonderful country.

The plateau is an agricultural country broken by many ridges. In the south is a portion of the great basin of Lake Titicaca, the remainder being in Bolivia; the whole is entirely surrounded by hills, thus cutting off all escape for its waters. North of this basin, in the valleys, flow the tributaries of the Amazon; on the plateau they flow due north, and then, escaping through the ridges, pour their waters into the Ucayali, the Huallaga, and the Marañon. These again, increased by the streams rising upon the eastern slopes of the Cordillera, enter the Amazon.

The greater portion of the population live on the central plateau, the Province of Jauja being the most thickly inhabited.

The Amazon provinces are thickly covered with vegetation, and are thinly inhabited. They are traversed in all directions by water-courses; the climate is mild, and the soil extremely fertile. In this country lies the head of navigation of the Amazon, beyond which the ways open to traffic are few, consisting of mule-paths almost impassible during the rainy season. The early Spaniards built extensive roads through the plateau, and it is said that the "Royal Highway" traversed the country from north to south. Along the coast there are also good roads, but across the mountains there are few passages. Several routes are used from the coast to navigation upon the Amazon, as previously mentioned, via the Marañon, Chachapoyas, and Huanuco, besides which there are no doubt others to reach the Purus and the Beni.

To overcome the difficulties of transportation and to give a market for the extensive mineral products railways have been extensively built and projected. The first efforts were towards the coast, and resulted in the construction of the Mollendo and Arequipa and the Callao and Oroya Railways; but recently others have been projected not only to the Pacific, but also to the eastward to reach the Pachitea, the Ucayali, and the Purus.

RAILWAYS.

Beginning at the north the railroads are as follows:

Payta to Piura, 63 miles; gauge, 4 feet 8½ inches; owned by the Peruvian Government; construction begun in 1872; total cost, \$2,000,000. An extension of this line to a point on the Amazon River called Limon, passing through the provinces of Huancabamba and Jaen, and forming a route which is claimed to be the shortest yet projected in South America, between the Atlantic and the Pacific, was originally contemplated by the Government, and preliminary surveys were made; but owing to the recent disturbed condition of the country the project has practically been abandoned. Near Tumbes, about 20 miles north of this road, is the petroleum region, producing oil of good quality. East of it is a great sugar region.

Pimental Railway, from Pimental to Chiclayo, with branches to Lambayeque, Muchumi, Tucuma, Pisci, and Ferranafe; total length 45 miles, of which 30 miles are completed. This company has no subsidy, but has a monopoly for twenty-five years.

The completed portion, of narrow gauge, has been opened for several years, and cost about 1,000,000 soles. It passes through a rich sugar and cotton country extending along the coast about 100 miles and 60 miles inland.

Eten and Ferranafe Railroad, from Port of Eten to Ferranafe, 50 miles. The original concession was made July 3, 1867, to José A. Garcia y Garcia, and transferred by permission of Government, October, 1867, to a stock company. The road is of standard gauge and was opened in 1873.

Pacasmayo and Magdalena Railroad, from Pacasmayo to Guadalupe and Yonan, 93 miles. This road was built of standard gauge, and is owned and operated by the Government. An extension is proposed to Cajamarca, where it touches a beautiful grazing and farming country; it could be extended to the Amazon via Chachapoyas and Moyobamba. A portion was destroyed by freshets, because it had been located near the river, in which there is a tremendous current in the winter. Near its present terminus are rich silver mines.

Salaverry and Trujillo Railroad, from the port of Salaverry to Trujillo, capital of the Department of La Libertad, 85 miles. This road, of 3 feet gauge, was built by the Peruvian Government and opened about 1875. There are some coal mines farther on, and it is proposed to extend the road to them, but it can have no eastern outlet.

Chimbote Huaraz and Requay Railroad, Chimbote to Requay, 60 miles; gauge, 3 feet. The total projected length is 172 miles. The construction of this road was begun in 1870 by the Peruvian Government, which owns and operates it. It runs through a broken, heavy country, and touches what is said to be one of the richest mineral regions in Peru, there being silver and mineral coal beds on the line. The coal is bituminous and valuable for steam and gas; the supply is said to be sufficient for the whole Pacific coast, while the harbor of Chimbote is probably the best south of Panama.

Lima, Ancon, and Chancay Railroad, from Lima to Chancay, 43 miles; gauge, 1 meter. This road forms the first and second sections of the Lima and Huacho Railroad. It runs north from the right bank of the Rimac River (which flows through the center of the city of Lima), following and nearly parallel to the coast. It was built by a stock company and was originally projected to run to Huacho, about 25 miles beyond Chancay, but no work has been done on the last section for many years. The concession was afterwards annulled and the road acquired by the Government. Its total cost was \$2,600,000.

Lima and Magdalena Railroad, from Lima to Magdalena, 5 miles; gauge, 1 meter.

Callao, Lima, and Oroya Railroad, from the port of Callao to Chicla, 86.5 miles; gauge, 4 feet 8½ inches. The construction was begun in January, 1870, by the late Henry Meiggs, under a contract made in December, 1869, with the Peruvian Government, which called for the completion of the whole line, Callao to Oroya, 135.8 miles, in six years. The contractor was to receive \$27,600,000 for the building of the line, which then was to become the property of the Government. The road presents some of the most remarkable engineering achievements in the world. Over sixty tunnels, or an average of about one in every 2 miles, pierce the mountain in its path. Among these the most remarkable is the Galera, or Summit, Tunnel, 104.5 miles east of Callao, which is nearly 4,000 feet long, and is 15,645 feet above the sea-level. At Mount Meiggs the road reaches its highest elevation, 17,574 feet, from that point descending the eastern slope of the Andes to Oroya, 12,257 feet above sea-level. In addition to the large number of tunnels there are also about eighty bridges, the most important being the Agua de Verrugas Viaduct, 576 feet long and 253 feet high, constructed on the Fink truss plan.

In consequence of the great engineering difficulties which attended the construction of this line its cost greatly exceeded the original estimates, and when the road reached Chicla, to which point it has been opened for several years, the funds applicable to its construction had been exhausted.

A contract was made by the Government in 1885 (a copy of which is found in the Report of the South American Commission) with M. P. Grace to construct a railway between Oroya and Cerro de Pasco, which at the end of ninety-nine years shall revert to the Government. This contract included the unconstructed section of the Oroya Railway between Chicla and Oroya. The company was also to have the preference in the construction of railways from any part of the line from Chicla to Tarma and Chanchamayo. The section from Chicla to Oroya was to be completed in four years from the date of the contract, with a penalty attached for its non-completion.

All articles necessary for the completion and operation of the line were to be imported free of duty. To complete it to Oroya and Cerro de Pasco is 85 miles, and of this part much of the heavy work and tunneling is already finished. Cerro de Pasco is the heart of the mining region. There is an immense basin $2\frac{1}{2}$ miles in length and about $1\frac{1}{2}$ miles in width, in which hardly a shovelful of earth can be turned without silver.

The highest point on this road is 15,684 feet, and the mines themselves are 14,300 feet above the sea.

This company owns the Cerro de Pasco Railway, running from the mines to their mill and the surrounding estates, used for the transportation of freight and passengers. The total projected length was 22 miles, of which 9 are built. The estimated cost was \$1,300,000, upon which the Government guarantees 7 per cent., and work was begun in 1869, under a contract with Henry O. Wyman & Co.

It is proposed to extend this road to a point called Chanchacayo, the head of steam navigation on the Amazon, and preliminary surveys have been made. The entire distance from Callao to this point is only 210 miles.

A branch of the Oroya road has also been projected to Jauja.

Another railway to form a connection with the Oroya road has been surveyed under Government supervision from Cerro de Pasco to Port Salvation, 204 miles distant, on the river Pichis, a stream flowing into the Pachitea, one of the Peruvian headwaters of the Amazon.

Lima railways, from Callao to Lima, 8.5 miles, and from Lima to Chorillos, 9 miles; gauge 4 feet $8\frac{1}{2}$ inches. These lines are owned by a British corporation, registered in 1865, to acquire and work two railways held under concessions from the Peruvian Government, the first section (Callao to Lima) of which was built by local capitalists under a concession granted in 1848, and the second (Lima and Chorillos) built by local capitalists under a concession granted in 1855. Original cost of both \$1,200,000.

Pisco and Ica Railroad, from port of Pisco to Ica, 46 miles; with a branch to Macacona, 1 mile; gauge, 4 feet $8\frac{1}{2}$ inches. This line was built by a private company, but afterwards purchased by the Peruvian Government. Its cost, \$1,450,000, is represented by bonds bearing 7 per cent. interest, which has been in default since 1875. The road was formerly leased by Señor Boza.

At Ica there is a rich mining and agricultural region, silver, gold, and copper being found, but the great mineral product is iron. This valley is famous for its grapes, and is also prolific in other fruits. The mountains would make it difficult to extend this line to the eastward, but if extended to the southward it would pass through a very rich region. No surveys, however, have been made for this purpose.

Mollendo and Arequipa Railroad, from the port of Mollendo to the interior city of Arequipa, 107 miles, where connection is made with the Arequipa, Puno and Cuzco Railroad. The construction was begun in 1868, and the line was opened in 1870. The road was located by John L. Thorndyke, of New York, and is owned by the Peruvian Government, by whom it was originally leased to Henry Meiggs. The total cost was \$2,000,000. The gauge is 4 feet $8\frac{1}{2}$ inches, and the rail steel, 63 pounds to the yard. The maximum grade is 4 per cent.; the minimum radius of curves 352 feet.

Arequipa, Puno and Cuzco Railroad, a continuation of the above line from Arequipa

to Puno, 217.6 miles, and from Juliaca to Santa Rosa, 82 miles, with sidings, etc., 41.5 miles. The gauge is 4 feet 8½ inches, the rail steel, 60 pounds to the yard; the heaviest grade, 4 per cent. The Puno division was opened in 1874, and the Cuzco division from Juliaca, in 1875. The latter was originally projected to Cuzco. A line of steamers on Lake Titicaca runs in connection with this railway from Puno to Chililayo, in Bolivia, 120 miles.

This road is owned by the Peruvian Government and was originally leased and operated by John L. Thorndyke, but by a recent contract it has been leased to M. P. Grace & Co., and is to be extended to La Paz in Bolivia.

Ilo and Moquegua Railroad, from the port of Ilo to the interior town of Moquegua, 63 miles, running through one of the richest wine-producing districts in the country. It was located by John L. Thorndyke, the construction begun in 1871, and opened in 1873, having cost in all \$5,025,000. It is owned by the Peruvian Government. Gauge 4 feet 8½ inches.

In the work on the railways of Peru submitted with the report of the delegate from that country lines of railways between various parts of the country are discussed. Among the roads proposed, in addition to those above named, are the following:

From Chancay (on the Lima, Ancon and Chancay Railroad) to Cerro de Pasco; from Ica (Pisco and Ica railroad) to Ayacucho in the interior; from Tacna (on the Chilean road between Arica and Tacna) to Puno; from Trujillo (Salaverry & Trujillo) to Cajamarca and Eten.

On January 11, 1890, the Peruvian Government signed a contract with the Grace bondholders ceding for sixty-six years the railways from Mollendo to Arequipa and Puno, Juliaca to Santa Rosa, Pisco to Ica, Callao to Chila, Lima to Ancon, Chimbote to Seechiman, Pacasmayo to Yonan and Guadalupe, Salaverry to Trujillo, Paíta to Piura, with all the necessary land for their extension. The work contemplated is, first, the extension and repair of the existing railways at an estimated cost of \$3,212,000, the extension of the Arequipa Railway from Puno, its terminus on Lake Titicaca, to Desaguadero, on the Bolivian frontier, by a narrow-gauge line; and second, to continue the line from Desaguadero to La Paz and Oruro, in Bolivia, at an estimated cost of \$3,150,000. The existing revenue from railways is \$6,300,000, which is to be available to the bondholders. Another concession in their hands empowers them to connect the Oroya Railway with the navigable waters of the Amazon by 180 miles of narrow-gauge road. Along with the contract mentioned there are cessions of valuable guano deposits.

PERU IN 1887-'88.

Foreign capital and enterprise are indispensable for the advancement of this country materially and in the way of business. The natural resources of Peru as regards mining, agriculture, wine growing, and cattle raising are unlimited, but find here no sufficient elements for their proper development, owing to inability of the Government to lend assistance and the general poverty everywhere experienced. And that capital and enterprise, certain to be richly rewarded, is withheld doubtless from the distrust entertained by foreigners as to the guaranties afforded to them in the investment of their means and the recent proceedings regarding certain railway contracts, based upon legal dispositions and perfected with properly-constituted Governments, are certainly not calculated to dispel such distrust. Some adventures of foreign capital have been made in mining enterprises. The famous silver mines of Hualgayoc, in the vicinity of Cajamarca, are now to be worked by an American company said to be well equipped with the means of successfully developing their undertaking, and the gold washings of Carabaya, near Arequipa, are in the hands of a responsible organization formed in London by the late Admiral Garcia y Garcia.

The Lima Railways Company, an English organization, recently sent to Peru the president of their board of directors, and this gentleman has been engaged in investigating the advantages of continuing the line connecting Lima with Chorilla to Pisco and Ica, 120 miles down the coast. This railway has been the subject of consideration for years past, and the general opinion is that from the immensely fertile region it would traverse, from whence the Lima and Callao markets could be

cheaply provided with provisions and meat, the undertaking would prove to be the most profitable, more particularly as the engineering difficulties to be surmounted are not formidable. No proposition has as yet been made to the Government, the decision of the London board having first to be heard; but it seems probable that the undertaking will be commenced. Owing to the complete service on the coast offered by steamers, the railways constructed or projected in Peru have had a route leading from the ports inland, and this possible departure from the customary plan is regarded with much interest. Another proposed railway has been surveyed, under Government supervision, from the Cerro de Pasco to Port Salvation, on the river Pichis, a stream flowing down to the Pachitea, one of the Peruvian headwaters of the Amazon. The road, if constructed, offers no especial difficulties, and would form a connection between Cerro de Pasco, the ultimate terminus of the Oroya Railway, and a point on the Pichis, 204 miles distant, where steamers drawing 3 or 4 feet of water can readily arrive, and then proceeding down to the Pachitea, carry the valuable products of that region, principally India rubber, dye-woods, fruit, etc., to markets on the Amazon and beyond. This road, when completed and connecting with the projected prolongation of the Oroya to the Cerro de Pasco, would open up the rich Amazonian region to enterprise from this portion of the Republic, communication between the two points at present being so difficult of accomplishment and so expensive as to prevent all profitable trade.

During the past year the Government at Lima has formed several military colonies composed of half-pay officers and veteran soldiers, which have proceeded to the country near the Pachitea for the purpose of founding settlements and opening up those districts to commerce. The information received from these expeditions corroborates the general descriptions regarding the natural wealth of those sections, and the Government is aiding the colonists with the limited means at its disposal.

The development and prolongation of the great railways, upon which such large amounts of money have been expended, depend upon the action to be taken by Congress regarding the proposals made by the bondholders of Peru abroad, whose capital has been employed in the undertakings, to the Government at Lima. To the general disappointment, and as the department was duly informed, this proposal, known as the Grace-Aranibar contract, was not acted upon by Congress at its last session owing to certain animadversions made against several of the clauses by the Government of Chili, and although the President at the opening of the Congress now in session did not refer to the contract in his inaugural message, his silence is explained by the official journals of Lima from the circumstance that as not only the Chilean but the British Government has interested itself in the matter, the communication made by the Executive to the legislature, or to be made, must be of a reserved character. On the successful issue of this contract depends, it is believed, the future progress of Peru. Should it be ratified, the necessary capital for the completion of the railways would be furnished by the bondholders, who thus seek to promote their interests, becoming the holders of the roads for a long period of time and giving a participation of profits to the Government, and at the same time giving an opportunity for labor and assuring the industriously inclined of lucrative occupation. Before closing this dispatch it may be possible to report some action of Congress regarding the important matter.

Numerously-signed petitions from different portions of the country have been presented to the Government, urging the adoption of this contract, but, as has been stated, we are in ignorance at the present moment of its prospects of success. The British minister at Lima received information from his Government a short time since to the effect that Great Britain could not entertain the conditions desired by Chili which, it is thought, were of a nature seeking to introduce some dispositions regarding the territory of Arica and Tacna, held by Chili for a period of ten years, into a contract purely mercantile in its character, and the English cabinet desired Peru to be made acquainted with the favorable views it entertains respecting the proposed contract, by which the interests of British creditors would be assured and those of Peru certainly advanced. (Report by United States Consul Brent, Callao, June 30, 1888.)

BOLIVIA.

The topographical features of this country are much the same as those of Ecuador and Peru, so far as the plateau and the eastern slopes of the Andes are concerned. The Cordillera of the Andes is divided into two parts, between which lies the basin of Lake Titicaca, Lake Poopo, and their tributary streams. This basin has an altitude of 11,000 to 13,000 feet above the sea, and is 500 or 600 miles in length and from 60 to 150 miles in width. It is so surrounded by mountains that no water escapes except by evaporation. On its southern edge is situated the city of Potosi, the highest in the

world. Among other cities in Bolivia are La Paz, 60,000; Cochabamba, 14,700; Sucre, 15,500, and Oruro, 8,000. In this State are the richest silver mines in the world.

On the eastern slopes of the Andes sources of the Amazon flow northward across the plain of Mojos and of the La Plata flow southeastward into the Atlantic. Of these are the Beni, Mamoré, and the Guapore flowing northward into the Madeira; the Pilcomayo and its tributaries emptying into the Paraguay. The plain of Mojos merges into the table-lands of Matto Grosso in Brazil, which separate the sources of the Amazon from those of the Paraguay and Parana. Canoe navigation is carried into the heart of the country; other transportation is by mules, for there are few roads that can be used by wheeled vehicles, especially during the rainy season. The falls of the Madeira alone prevent large boats from ascending the Mamoré a long distance; to overcome this a railroad has been projected around them in Brazilian territory. The principal road extends from Puno in Peru to La Paz, the capital of Bolivia, proceeds southward near the shores of Lake Aullagas through Oruro to Potosi and thence to Tupiza, with branches to Sucre, Cochabamba, and other cities.

Exports find their way out of the country to the eastward by the water-courses, on the north by Lake Titicaca and the Peruvian Railroad to Mollendo, on the west and south by land transportation.

RAILWAYS.

It will not be long before Bolivia will have an extensive railroad system. The railway, of narrow gauge, from Antofagasta has just been completed to Uyuni, 379 miles. The same company has contracted for the prolongation of this line to Oruro, a distance of about 198.5 miles. The Government has guaranteed an annual interest of 6 per cent. upon a capital of about \$3,000,000. Uyuni is about 16 miles from Huanachaca, 125 from Potosi, and 217 from Sucre.

A railroad is projected from Tacna, the terminus of the Arica-Tacna Railway, to Corocoro or to La Paz, about 250 miles. This will be difficult of execution because of the abruptness of the mountain slopes; at present there is a mule road between these points, over which much traffic passes.

A concession has been granted for the extension of the Arequipa-Puno Railway in Peru, to Desaguadero, and from there to La Paz, the capital of Bolivia. It is to be extended to Oruro, where it will join the line from Antofagasta. From Oruro a branch is projected to Cochabamba.

The Central Northern Railway of Argentine is to be extended from Jujuy to the Bolivian frontier, whence it will be easy to continue it to join the Bolivian line at Uyuni.

Another important project is for a railway from the Paraguay River to Santa Cruz and Sucre.

Besides these lines, which have the important object of giving outlets for traffic beyond the borders of the State, there are minor projects which while serving the same purpose are of great value for internal commerce, as follows: From Santa Cruz to the Rio Grande, from Cochabamba to the Rio Chimoré, and from La Paz to the river Beni. There is a line of telegraph from the Argentine frontier through Potosi, Sucre, Aruro, and La Paz to Chililayo on Lake Titicaca, and another to the Pacific coast.

Till within a few years, the vast agricultural and mineral resources of the country were entirely dormant for want of means of communication, but more recently an attempt has been made to construct roads and railways. The silver mines of Potosi alone are estimated to have produced 600,000,000 sterling from their discovery in 1545 down to 1864. The Indian rubber supply of Bolivia is of the finest quality and almost inexhaustible. Cocoa is one of the most important products of Bolivia; in 1884-'85 the quantity derived was valued at £343,660; and cinchona is another important culture; a report of the United States consul, referring to 1884-'85, estimates the number of trees at five millions and the quantity of bark produced in the year at 200,000 pounds. (Stateman's Year Book.)

Besides those mentioned other exports are coffee, copper, tin, and cubic niter. Two-thirds of the exports consist of silver.

CHILI.

This country, consisting of the territory between the mountains and the Pacific coast from Peru southward for about 1,800 miles, has been well covered by railways, and was the first of South American countries to build them, having opened the one from Caldera to Copiapo in January, 1852. The first railways were built from the sea-coast towards the interior, and afterwards extended in all directions until the country is united throughout. This is strictly true for the southern part, and in the north a railway is projected which will give almost unbroken communication throughout the entire State. Two transandine lines are under construction and will be finished at an early day, one from Valparaiso, across the Uspallata Pass at an elevation of 10,600 feet, with a tunnel several miles in length, to Mendoza and thence to Buenos Ayres, 870 miles, the other from Zumbel in Chili to Bahia Blanca. To these might be added the Antofogasta line, which will soon be completed to Huanchaca in Bolivia, where it will join the line under construction from Buenos Ayres, thus forming a transcontinental line. Another has also been spoken of from San Antonio on the Copiapo Railway, crossing the Andes at 27 degrees south longitude, following the Jorquera, Turbes, and Cachelos Rivers, ending at Pucha Pucha on the Argentine frontier, and another from Concepcion to Buenos Ayres.

On the line now being constructed, the grade in some portions is 422 feet per mile, to overcome which the Abt rack-rail system is to be used.

A table is given in the report of the delegate from Chili, from which I extract the following:

Lines of railroad built and owned by the state.

Termini.	Kilo-meters.	Average cost per kilometer.
		<i>Gold.</i>
Santiago to Valparaiso.....	187	\$69,781
Santiago to Curico.....	185	32,171
Curico to Chillan.....	210.9	28,412
Chillan to Talcahuano.....	187.5	26,436
Andes Branch.....	45	22,783
Palmilla Branch.....	39	9,820
San Rosendo to Angol.....	73	28,070
Angol to Traiguén.....	72	55,982
Santa Fé to Los Angeles.....	22	28,070
Renaica to Fort Victoria.....	75	55,982
Robleria to Collipulli.....	42	-----
Chanaral to Animas and Salado.....	60	5,842
Total (743 miles).....	1,198.4	

The total receipts for 1887 were \$6,349,621.20 and the expenses \$4,197,250.66, leaving a clear gain of \$2,152,370.64.

Of private lines there are quite a number, aggregating 1,000 miles, and the Congress has recently approved a contract made by the executive with Mr. Newton B. Lord for the construction of ten lines, aggregating 608.84 miles, the total cost of which will be about \$17,500,000, the average cost per mile being \$28,700, more or less. I have found a description of these in the Engineering News which is here given in full:

THE NORTH AND SOUTH AMERICAN CONSTRUCTION COMPANY IN CHILI.

The roads which are to be constructed by the North and South American Construction Company are briefly analyzed as follows, beginning at the most northerly one, by Col. S. H. Lockett, who was one of the representatives of the syndicate in securing the concession.

(1) Road from Huasco to Vallmar, 1-meter gauge, 50 kilometers long; starts at the port of Huasco, a village of about 1,000 inhabitants, lying on a bluff near the

mouth of a small river, whose waters coming from the melting snows of the Andes sometimes find their way to the sea, but are generally exhausted in irrigation or lose themselves in the sandy river-bed. Huasco has quite an extensive copper smelting works. The harbor or roadstead is fairly good, but a mole is needed, and is one item of the specification for the railway. The road runs up a level, cultivated valley with but very slight irregularity of surface, crosses the river once on an unimportant bridge, terminates at Vallmar, a town of between 5,000 and 6,000 inhabitants; climate good; valley fertile and fruitful.

(2) Road from Ovalle to San Marcos, is 1-meter gauge, 60 kilometers long; is prolongation of a road now in operation from Coquimbo to Ovalle, a town of 5,500 souls. The roads follow the valley of the Limaré River, cutting across the spurs of hills, giving rise to some deep, but not long, excavations and fills; considerable amount of rock cutting, but nothing that would be called difficult work; one important bridge across the Limaré River of 210 meters length; numerous small bridges, culverts, and drains across the irrigation canals, and small runs from the side hills; climate good; valley fertile. Coquimbo, the landing place, is considered the best port of the entire coast.

(3) Road from Los Vilas to Illapel and Salamanca, starts from the port of Los Vilas, where there is a mole, takes a sharp curve around a lake back of the port and returns to the coast, skirts along the coast, crossing sand dunes and mouths of gulches, coming around or cutting through rocky head lands till it arrives at Huantelauquen, a distance of 5.19 kilometers. This is a somewhat difficult portion of the line to construct, and will be more difficult to keep in good condition.

At Huantelauquen the road turns up the narrow valley of the Choapa River, one branch following this river to Salamanca, the other to Illapel on a stream of the same name. Both streams have rocky spurs to be skirted or cut through. There will be gradients of 2 per cent. and numerous curves, so that the entire line may be designated as "heavy work." The valleys are fertile and the mountains rich in silver, copper, and gold; climate good. There will be two bridges of 60 meters span, one of 40, and numerous smaller ones.

(4) Road from La Calera to La Ligua and Cabildo, 77 kilometers, 1-meter gauge, starts from La Calera on the Valparaíso and Santiago line, crosses the Aconcagua River on a bridge of 200 meters length, and follows the valley of the Melon 16 kilometers; winds up the "quebrada" (cañon) of Collague until at the twenty-fifth kilometer it is 495 meters above the level of the sea; here crosses the Sierra del Melon by a tunnel nearly 1,000 meters long; winds down the northern slope of the Sierra and reaches the valley of La Ligua at an altitude of 69 meters above sea level, then follows the valley on an easy line to its terminus at Cabildo. The gradients in crossing the "divide" are as high as 3 per cent.; curves are numerous; one hundred and twenty-three culverts and small bridges, one bridge 200 meters long, and three others of minor importance. Being in the heart of Chili, the line has favorable conditions for securing labor, plant, etc. The heaviest work of all the lines is on this one.

(5) Road from Santiago to Melipilla, 59 kilometers long, 1.68-meter gauge, follows the rich fertile valley of the Mapocho River, presents no difficulties, has one bridge of 252 meters in length.

(6) Road from Palmilla to Alcones; 45 meters long, 1.68-meter gauge; is a prolongation of a branch of the main trunk line south, runs through a level and undulating country; presents no points of difficulty or of special interest. It is proposed to continue this ultimately to the coast, having Pichilemo for its terminus; this extension will cross the coast range and bring in some tunneling and other varieties of mountain work.

(7) Road from Talca to Constitucion, 85 kilometers long, 1-meter gauge; starts from the important inland city of Talca, follows the river Maule on its north bank until it has reached a point nearly opposite to Constitucion, at its mouth; crosses the river by a bridge 280 meters long, which is much the most difficult work of the line. Following the sinuosities of a crooked stream, sharp curves are numerous, and deep, short cuts and corresponding fills of frequent occurrence, with considerable rock work. One tunnel 90 meters long is encountered.

(8) Road from Pelequen to Peumo, 35 kilometers long, 1.68-meter gauge, is a branch of the main trunk line running through a level country, having nothing of interest except a bridge across the Cachapoal River of 360 meters length.

(9) Road from Coihue to Mulchen, 43 kilometers long, 1.68-meter gauge; a branch of the main trunk line running up the valley of a small stream with no elements of difficulty.

(10) The road from Victoria to Valdivia and Osorno, 403 kilometers long, 1.68-meter gauge.

This is the prolongation of the grand central trunk line, follows the trend of the central valley, generally avoids hills and rough ground, but crosses numerous small streams and many of considerable size. About 20 miles from Victoria it enters the southern forest, a region comparable to the great forests of Oregon. Considering the

length of the line, the grading work will not be very heavy; but one short tunnel occurs, but the amount of bridging is proportionately very great. In addition to numerous small bridges, culverts, open and arched drains, there are forty-one principal bridges, varying between 50 and 250 meters in length, and ranging in height from 4 meters to 38 meters. The climatic conditions will present some difficulties, as the rains are copious and the rainy season prolonged.

The labor question will be one of considerable importance in the execution of works of such magnitude in a country whose population is only 2,500,000 people. But the liberality of the Government in providing for the introduction of foreign laborers and artisans has done much towards a solution of this problem. It might be mentioned here that a prevalent soil in Chili is the so-called *tosca*, or "hard-pan" of the United States.

Taking all things into consideration, there seems to be every reason for believing that the contract just made between the Chilean Government and the North and South American Construction Company will be fulfilled in the specified time of five years, to the honor and credit and profit of both parties.

When these are constructed the north and south line will extend, with the exception of one or two short breaks, for a distance of about 1,450 miles.

The following is a brief account of the private lines:

Angelo Chilean Nitrate and Railway Company.—This British corporation was registered in 1888 to acquire nitrate grounds in the Province of Antofagasta, and to construct railways and other works. By the terms of the contract the entire line from Tocopilla to the nitrate grounds, 60 miles, was to be opened to traffic by December 29, 1889.

Antofagasta and Bolivia Railway Company, formed for the purpose of acquiring from the Compania Huanchaca, de Bolivia, the concessions granted by the governments of Bolivia and Chili for the construction of railways and telegraphs from Antofagasta to Huanchaca, 395 miles, via Salinas, El Dorado, to the village of Calama, hence eastward to the borate deposits of Ascotan on the frontier of Bolivia, and thence to the silver mines of Huanchaca. The whole of the Chilean section, 272.8 miles, has been opened for traffic, and it was expected to complete the whole line in October, 1889. This line is to connect at Huanchaca with the Argentine line from Buenos Ayres, and will be extended to Potosi and Oruro, connecting there with the Peruvian line from Puno.

Arica and Tacna Railway, from the Port of Arica to Tacna, 39 miles, opened in 1854. This road is situated in territory acquired from Bolivia by the treaty of 1883.

Antofagasta Nitrate and Railway Company.—Projected line from Antofagasta to Chonchi, 185 miles, with branches, extensions, etc., 20 miles. The gauge is to be 2 feet 6 inches.

Antofagasta and Aguas Blancas.—A contract was recently signed by the Government with Mr. George Phillips for the construction of a railway with 1-meter gauge between these two points, and which is to pass through all the nitrate works between them, with branches to any others that may be established hereafter. Plans are to be submitted to the Government within three months, and work is to be commenced within four months after their approval.

Carrizal and Cerro Blanco Railway, from Carrizal to Yuerba Buena, with a branch from Canto del Agua to Carrizal Alto, and other branches making the total length 50.2 miles. The extension up the Jarilla Valley, 20 miles, was completed in 1886. This road is owned by a British corporation formed in 1880 by the consolidation of the Carrizal Railway and the Cerro Blanco Railway.

Copiapo Railway, from Caldera to San Antonio, 93.6 miles, with branches from Pabellon to Charnacillo, 24.6 miles; from Paipote to Puquios, 31.6 miles; total, 150.0 miles, with sidings, etc., 19.2 miles. This is the pioneer road of the southern hemisphere. The company was organized in October, 1849, and the road was opened to Copiapo in January, 1852; to Pabellon, January 1, 1855, and to San Antonio, February 1, 1867. In 1868 the Charnacillo branch was purchased, and on January 20, 1871, the Puquios branch was opened. This road has been very profitable.

Coquimbo Railway, from Coquimbo to La Serena and La Compania, 9.3 miles; and

from Coquimbo to Ovalle, with branch to Panulcillo, 76.3 miles. This road was opened to Las Cardas and La Compania in August, 1862. Gauge 5 feet 6 inches.

Elqui Railway, from Serena to Elqui, 48.4 miles, opened in 1883. Gauge, 1 meter. Uses tracks of Coquimbo Railway from Serena to Compania, a third rail having been laid for that purpose between those points.

Laraquete and Moquegua Railway, from Laraquete to the coal mines of Quilachanquin and Moquegua, 24.8 miles.

Mejillones Del Sur and Cerro Gordo Railroad, from Mejillones to Cerro Gordo, 18 miles.

Patillos Railway, from Patillos to Salibreras Del Sur, 57.7 miles, projected to Lagunas, 10.5 miles further; total, 68.2 miles. This road is owned by a British corporation, and was built in 1872. Gauge, 2 feet 6 inches.

Pisagua Railway, from Pisagua to Tres Marias, 54.8 miles, with branches to Agua Santa and Puntunchara and sidings; total, 65.7 miles.

Iquique Railway, from Iquique to Tres Marias, 67.7 miles, with branches to Virginia, 19.2 miles; to Bodegas, with sidings; in all, 120.3 miles. This road connects with the Pisagua Railway. Both of these lines were built about twelve years ago, by private capital, to develop the nitrate mines. Gauge, 2 feet 6 inches.

Taltal Railway, from Taltal to El Refresco, 18 miles. Branch projected to the Arturo Prot mines. Sidings, 3 miles. This road is owned by a British company, incorporated in 1881. Construction was begun in December, 1880, and the road opened October, 1882.

Tongoy Railway, from Tongoy to Tamaya, 33.1 miles; Tongoy to the smelting works in Tongoy, 1 mile; total 34.1 miles. Gauge, 3 feet 6 inches. This road was built in 1867, by a Chilian corporation established in 1865. An extension from Cerrillos to Ovalle, 20.5 miles, was projected and has been surveyed.

The South American Commission, in their report upon Chili, state that the experiment of governmental management of railways has not been a success. They also say that nearly all the railway supplies are obtained from the United States.

W. C. Quinby stated, in the testimony given before that Commission, that a road had been surveyed from Colon to Bogota, thence to Quito and Cerro de Pasco, and down to Cuzco and Argentine; that it was a preliminary survey, made probably from the maps and water-courses. He thought it would never be built.

AMERICAN RAILWAY BUILDERS IN CHILI.

The most interesting feature I have to report on this occasion, in connection with United States affairs here, is the letting of a Government contract for the construction of about 1,000 kilometers of railway to an American syndicate. The contract price is about £3,500,000, but, unfortunately, the agreement has been seriously affected by a sudden and unexpected advance in the price of exchange on London. When the contract was signed exchange fluctuated between 25*d* and 26*d*; but since then it has touched 30*d*, and is now fluctuating between 28*d* and 29*d*. It is estimated that an exchange of 30*d* would cause a loss to the contractors of about \$3,000,000, and negotiations on an exchange basis to provide against a contingency, have been opened between the representatives of the syndicate and the Government. It is understood that the President of the Republic is desirous of making equitable concessions, and if this matter can be satisfactorily arranged there will be nothing, after the stipulated security of \$1,000,000 for the fulfilment of the contract is deposited in this country, to hinder the contractors from commencing operations at once. The rolling stock for the new lines is to be mostly of American pattern, and, therefore, the probabilities are that this class of materials will be mostly procured from the United States.

This fact and these circumstances would seem to invite the attention and enterprise of our unequalled car builders. (Report by James W. Romeyn, U. S. Consul, Valparaiso, Chili, December 15, 1888.)

CHILIAN LOCOMOTIVES.

I have referred incidentally to the building in Chili of certain locomotive engines and cars for the State railways. I had lately the satisfaction of visiting and inspecting unofficially, of course, the extensive works of the contractors for the six locomotives,

Messrs. Lever, Murphy & Co., at Caleta Abarca, about 4 miles from this port. Mr. Lever is an Englishman, though formerly a resident of San Francisco. The firm have large capital, have been long established, and have done a great deal of work in repairs on United States vessels of war.

The wages of their employées, about four hundred and fifty in number (some 70 per cent. of native birth, the others English, Scotch, and Irish), run as high as \$7, Chili money (nearly \$4 gold), per day. The locomotives (two still in the shops in a forward state, the four others contracted for having been delivered, the first in December last) are entirely constructed here with the exception of the wheels, which are of English manufacture. The contract price was \$40,000 each, about \$21,000 gold. Eighteen months were allowed for the construction of all. The general design is the American with the American bogie, and with cylinders on the outside, instead of on the English plan. These cylinders are relatively larger than ours, 17 by 24. Certainly, the American engine is much the better adapted to the sharp curves of those mountain roads.

The machinery used by the constructors for this and other of their metal work is English; that for wood-working from the United States. Their steel is imported from England; pig-iron for castings, from Scotland. Through the kindness of Captain Saukey, an Englishman, but holding the appointment in the Chilean Naval Service of Inspector General of Machinery, I had the opportunity of inspecting the new steel boilers in construction at the same works for the Chilean steam corvette *Pilcomayo*, a wooden vessel built in England, captured from Peru in the late war. The contract price for these boilers (two) is \$52,000 paper currency, about \$27,000 gold. (Report by Jas. W. Romeyn, U. S. Consul, Valparaiso, Chili, February 29, 1888.)

ARGENTINE.

This country is level except in its most northern and western parts, which perhaps, as much as any thing else, has contributed to its wonderful railway development. The other prominent factors are the energy of its people and its great resources.

Its railway system is more complete than that of any other South American country, for all parts of the country are in communication with each other, and as far as international lines are concerned this development is complete.

Radiating from Buenos Ayres the railroads traverse the country north, south, east, and west. They touch the eastern coast at La Plata, Mar del Plata, and Bahía Blanca. The western boundary is already crossed to unite with the Chilean railway from Valparaiso, and projects have been formed to unite at other points with the Chilean railways from Copiapo and La Concepcion. In the north the Bolivian frontier will soon be reached from Jujuy. At Corrientes and Posadas connection will be made with lines in Paraguay, at Monte Caseros with Brazilian lines, and at Concordia with those of Uruguay.

A very noticeable fact is that English and French capital, and more especially the former, has produced this wonderful development. This may be truthfully said of all South American countries, except Peru and Colombia. Not because there is a prejudice against North Americans, but probably on account of the indifference exhibited by capitalists to the great field which is open to them; and perhaps this should not be called indifference, for capital so far has always found an outlet in our own country.

As an evidence of this, I append a copy of a letter published in the *Railway Age* of February 22, 1890:

ARGENTINE REPUBLIC, SOUTH AMERICA,
National Hotel, Buenos Ayres, January, 1890.

[Correspondence of The Railway Age.]

In my last letter to you I remarked that I would like to see a railroad built and operated in this country by North Americans; that I could see no reason why the capitalists of North America should not invest their funds in this country, as the English are now doing, as their chances are just as good—even better. Here is a country whose soil and climate are unsurpassed; a country rapidly filling up by immigration. The statistics show for the year an immigration increase in the population of 287,000—almost 1,000 people per day landing on these shores, and there is work

for all. For this I can vouch, for to-day it is really a difficult matter to procure laborers for public works. The Government guaranties most of the lines, and all material for railroad purposes is imported free of duty. What a chance for North Americans, who do most of their construction nowadays with machinery. Even the English are beginning to use it here. I know of one contracting firm, away up in the province of Salta, who are working fourteen steam shovels (of English make). Salta is the province in the extreme northwest of the Republic, and the last place in the world where you would expect to see such heavy machinery. The English contractors are beginning to send orders to the States for tools and machinery that are new to them as well as to the country.

A company is organized in England; a concession is applied for in this country; if granted, the capital, engineers, contractors, and tools are sent from England and the work commenced. Why don't we hear of North Americans doing likewise? After the road is built the factories of England get the orders for the rolling stock. True, there is some North American rolling stock here, but there ought to be more. To a North American down here it looks very much as if his countrymen were asleep. John Bull is alive to his interests, and while he sends some of his sons to the States to buy up its breweries he is sending others to build railways in this country. I like the American's pride in himself, but I can't help thinking that the English have more enterprise than we. Go where you will you'll find English. I append here a clipping from the Buenos Ayres Standard of January 1, 1890, giving a review of Argentine railways during the year 1889.*

H. Z. TILLOTSON.

RAILWAYS.

The following is a list of the railways corrected to January 1, 1890, by the use of the above-mentioned extract:

Andine Railroad, from Villa Maria to San Juan via Villa Mercedes and Mendoza, 480 miles. Construction was begun in 1870, and sections opened at various times as they were completed; the Rio Cuarto section in 1873 (82 miles), 76 miles in 1875, 59 miles in 1880, 75 miles in 1883, 80 miles in 1884, and 108 miles to San Juan in 1885. This road was built by the Federal Government at a total cost of about \$15,000,000. It is the intention to form a connection through the Uspallata Pass with the Chilian line from Valparaiso. The work is now being pushed with vigor, and it is believed that but little remains to be done. The gauge is 5 feet 6 inches.

A company under the name of the Buenos Ayres and Valparaiso Transandrine Railway Company has been formed to build this extension from Mendoza to the Chilian line, a distance of 121 miles, and the line as above stated is now under construction. This company has a Government guaranty of 7 per cent. on its capital for twenty years.

Argentine Northeastern Railroad.—Line projected from Monte Caseros to Corrientes, 229 miles, and from Monte Caseros to Posadas, 283.7 miles. The concession calls for the completion of the road in five years. Work was pushed during 1889 with remarkable activity. Up to November 30, one hundred and seventy bridges had been built and thirty were in course of construction; 89 miles of rails had been laid and several stations finished.

Bahia Blanca and Northwestern.—A concession has been obtained to build a road from Bahia Blanca to Villa Mercedes via Rio Cuarto, 738 miles. Work was begun on the 18th of September, 1889.

Bahia Nueva Railway, Chubut.—The line was inaugurated on May 25.

Belgrano and Tigre Railway.—The plans were approved in May and the work begun.

Buenos Ayres and Ensenada Port.—From Buenos Ayres to Ensenada, 35 miles. Built by a British company, and opened January 1, 1873; its total cost was about \$3,950,000, and its earnings are \$10,000 a mile.

Buenos Ayres Northern Railway.—From Buenos Ayres to San Fernando, 20 miles. This company has a subsidy from the provincial government of Buenos Ayres. The total cost was about \$2,500,000, and its net earnings in 1887 about \$300,000.

Buenos Ayres Great Southern Railway, from Buenos Ayres to Bahia Blanca, 445.25 miles; Altamirino to Tres Arroyos, 300.25 miles; Maipu to Mar del Plata, 80 miles;

total, 825.5 miles. Second track 13.5 miles. There are also new lines under construction—San Vicente to Las Flores, about 85 miles; Las Flores to Taudil, about 89 miles; Tres Arroyos to Bahia Blanca, about 112 miles; Piqué to Trenque Lanquen, 132 miles; Arbolito to Necocheas, about 93; in all 511 miles. The first section of this road was opened August, 1864.

Buenos Ayres and Bahia Blanca.—Plans for this line must be submitted to the Government before May, 1891.

Buenos Ayres and Pacific Railway, from Mercedes province of Buenos Ayres, to Villa Mercedes, province of San Luis, 371.4 miles from Mercedes to Buenos Ayres, 54.6 miles, or in all 426 miles. The construction of this line was begun in May, 1883, and opened from Orillanos to Villa Mercedes March, 1886, and from Mercedes to Buenos Ayres in March, 1888. This line forms the most important link in the transandine line, connecting at Villa Mercedes with the Andine Railway and at Mercedes with the Western of Buenos Ayres. This company has a gauranty of 7 per cent. upon a capital of about \$20,000 a mile.

Buenos Ayres and Rosario Railway (Temple concession).—The surveys were begun and will soon be completed.

Buenos Ayres and Rosario Railway.—Buenos Ayres to Sunchales, 341 miles. An extension is under construction from Sunchales to Tucuman, about 385 miles, and rails have been laid for a distance of about 77.5 miles; part of the line was opened in September, 1889. In the second section of the line to Santiago del Estero the earth-works were pushed forward with great activity. Branches have been authorized from Galvez to Monteros and from Irogoyen to Santa Fé, a total of about 110 miles. A branch from San Lorenzo station to the river bank was opened in August, 1889.

Campana Railway, Pila, surveys have been completed and plans will be presented to the Government immediately.

Central Argentine Railway, Rosario to Cordoba, 246.6 miles, with branches to Las Yervas and to Porgamino in course of construction, 167.5 miles. The company opened to traffic in July the first section from Canada de Gomez to Las Rosas, and the second section from Las Rosas to El Treval is also ready for service. The other section from Canada de Gomez will be ready for public service in January. The main line was opened in 1870, its total cost being about \$9,000,000.

The concession for a road from Rosario to Pezzano has recently been transferred to this company, the plans having previously been approved by the Government.

Chilecito and Mejicano Railway.—The plans were approved in June.

Cordoba and Northwestern.—Road authorized from Cordoba to Crus del Eje, 100 miles. It has a subsidy of \$35,500 per mile. The property is to be exempt from taxation, and at the end of fifty years after the completion of the work it is to revert to the Government.

Cordoba Southern Railway, Santa Fé.—The new plans and the contract for construction have been approved by the Government.

Cordoba Central Railway.—Company was registered in August, 1837, to acquire a concession granted by the provincial government of Cordoba. The line is projected from city of Cordoba to a junction with the Western and Central Colonies Railway of Santa Fé, 132 miles.

East Argentine Railway.—Concordia to Monte Caseros, 96 miles, Monte Caseros to Ceibo Creek, 3 miles. This line follows the west bank of the Uruguay River, and was opened to Ceibo Creek in 1880. The concession was granted in 1869. From Ceibo Creek this company runs steamers to Uruguayana, Brazil.

Entre Rios Central Railway, from Parana to Uruguay, 186 miles, traversing the entire province. The first section of the line to Nogoya, 77.5 miles, was to be opened in 1886 and the remainder the following year.

First Entre-riano Railroad, Gualaguaychu to Puerto Echague, 6.2 miles. Owned by the province of Entre Rios, and built in 1878, at a cost of \$153,839.

Gran Chaco Austral Railway.—Although the plans were approved in 1888, the work has not yet been begun.

Goya and Lucero Railway.—The plans were approved and the kilometric cost was set down at \$28,000 in gold. This is equal to about \$45,162 per mile. The work of construction has not begun.

Interoceanic Railway.—The contract was approved in February, Mr. Bustamante being the concessionaire.

Lugan Railway (Melincue).—Plans for the entire length of the line are before the railroad bureau.

Mendoza and San Rafael Railway.—Projected from Mendoza to San Rafael, 180 miles south of Mendoza. Surveys are in progress and the road is to be built by the National Government.

National Central Northern Railway.—Main line, Cordoba to Tucuman, 338.5 miles. Branch from Frias to Santiago del Estero, 100.4 miles, and from Recreo to Chumbricha, 109.1 miles. Gauge, 1 meter. This line, built and owned by the National Government, was begun in 1872 under the direction of José Telfener, and in 1885 both lines were opened. The total cost was about \$22,000 per mile. It crosses 300 miles of country in which there is no water. Each freight train carries three water-tank cars, each containing 8 tons of water. The line is now open to Salta and Jujuy and will ultimately be extended to the Bolivian frontier.

Northern Colonies Railway of Santa Fé.—From Santa Fé to Lehman, in same province, 62 miles, opened in July, 1885. Branch from San Carlos to Santa Fé, opened in 1886, and from Santa Fé to Port of Colastine in October, 1886. An extension from Lehman to the southern boundary line of the lands of the Santa Fé Land Company, 100.75 miles, is under construction. This line was built and is owned by the provincial government of Santa Fé.

Nanducito and Presidencia Roca Railway.—The final plans were completed and cost per mile, \$46,194, approved.

Northwest Argentine Railway.—Line projected from La Madrid, on the Central Northern Railway, to Tucuman. The first section to Santa Ana, 30 miles, was opened in July, 1883, and the whole line was to be completed in the summer of 1889. There is no monetary guaranty with the concession.

Patagones Railway (Villa Maria).—The surveys were to have been presented to the Government in November.

Posadas Railway (Ituzaingo).—The concessionaires are to present plans before the end of 1890.

Resistencia and Oran Railway.—Very little progress was made in the plans, and the Government has allowed another year for the presentation.

Reconquista Railway (Villa Maria).—Plans are to be presented before the end of April.

San Antonio-Areco Railway (Rivadavia).—The contract for the building was signed in January; the original plans were amended and approved in November.

San Cristobal and Tucuman Railway.—The plans were approved and work begun in October, rails having been laid as far as kilometer 17.

Santa Fé and Cordoba Great Southern Railway.—A concession was granted by the National Government for a line of railway from Villa Constitucion, via Melincue, to Venado Tuerto, a distance of 103 miles, and from Villa Constitucion to La Carlota, 84 miles; a total distance of 187 miles. The concession exempts the property from taxation and calls for the completion of line by January 22, 1891. The section from Villa Constitucion to Melincue was expected to be opened about January, 1890.

San Fernando Railway (Pergamino).—All the plans have been approved and authority has been given to build a double track.

San Juan to Chumbicha Railway.—The plans were approved in October.

San Juan to Salta.—The plans for the first 60 miles were examined and approved.

San Rafael to 9 de Julio.—Plans were approved in July.

Santa Rosa Railway (Concepcion del Tio).—The plans and surveys of this line, 105.4 miles long, were approved on the 7th of November last.

Santa Rosa and Oran Railway.—The surveys were begun and the guaranty reduced to 5 per cent., on a kilometer cost of \$37,000 in gold (\$58,678 per mile).

Tinogasta and Andalgalá Railway.—All the plans were approved. The line enjoys a guaranty for twenty years.

Villa Mercedes and Rioja Railway.—The contract was approved in February. The total cost of the line was set down at \$13,837,500 gold; the length of the line being 381.3 miles.

Villa Maria and Rufino Railway.—Projected from Villa Maria, on the Central Argentine Railway, to Rufino, on the Buenos Ayres and Pacific, a distance, via Villa Nueva and Carlota, of about 140.5 miles. The concession was obtained from the National Government. The works were begun in July, the line being divided into two sections, viz: From Villa Maria to kilometer 109, and from there to Rufino. On the 30th of September the earthworks had reached kilometer 30 and the rails kilometer 8.

Western and Central Colonies of Santa Fé.—Lines in progress, San Carlos (N. C. Ext. Co.) to Galoez (B. A. and R. Ry.), 217 miles; Gessler Colony to Corondo, 18.6 miles; Pilas (N. C. Ry.) southwest to boundary of Cordoba, 52.7 miles; Humboldt (N. C. Ry.) northerly 49.6 miles. The lines are being built by the provincial government of Santa Fé, and it was expected that they would be opened during the latter part of 1889.

Western Railway of Buenos Ayres, from Buenos Ayres to 9 de Julio, 162.4 miles; Lugan via Pergamino to Junin, 155.6 miles; Merlo to Lobos and Saladillo, 93.6 miles; La Plata via Temperley to Moron, 47.1 miles; La Plata to Ferrari, 24.2 miles; Pergamino to San Nicholas, 45.9 miles; Temperley to Cannuelas, 29.1 miles, and several small branches aggregating 19.8 miles, or 574.7 miles in all. There are projected: 9 de Julio to Los Mellizos, Saladillo to Alvear, second track 28.5 miles, and other track 74.4 miles—a grand total of 677.66 miles. The construction of the road was begun in 1853 by the provincial government of Buenos Ayres. Gauge, 5 feet 5 inches.

Western Railway of Santa Fé.—Projected to run from Rosario to San José de la Esquina, 110 miles, and from Candelaria to Melincue, 80 miles. It is completed from Rosario to Candelaria, 40 miles.

The engineer department of the Government drew up plans for the following: Santa Rosa via Majotero to Salta, Salta to Cabra Corrol, San Juan to Jachal, Chumbicha to Tinogasta and Andalgalá.

All that relates to the Argentine railways is under the supervision of the department of civil engineers, an important and ably managed national bureau which employs ninety-eight civil engineers.

There continues to be a great movement throughout the Argentine Republic in the construction of railways. So great are the number of new concessions granted by the national congress and by the different provincial legislatures that I find it impossible to name them all. Up to the meeting of the last congress there were national concessions for seventeen different lines, of which thirteen enjoy the guaranty of the Government. These guaranteed lines represent a total length of 7,961 kilometers (4,975 miles), and the aggregate length of the other lines, 1,272 kilometers (795 miles), making a total of 5,770 miles. Among them are the following, viz: The Chaco and Tartagal Railway, the Reconquista and Formosa (Chaco) Railway, the Bahía Blanca and Villa Mercedes Railway, the San Juan and Salta Railway, the Chumbicha, Tinogasta and Andalgalá Railway, the Goya and Monte Caseros Railway, the Resistencia and Metán Railway, the San Cristobal and Tucuman Railway, etc. A line from San Juan to Cabra Corral, in Salta, is being surveyed, as also one from Mendoza to San Rafael; also the line from Cobos to Salta via Lagunilla, and several others of less prominence.

The following roads are in the course of construction, to wit: The extensions of the Northern Central, the road now being opened beyond Tucuman as far as Chilcas. The branches from Dean Funes to Chilecito, and from Chumbicha to Catamarca have the road-beds completed and the track laying has commenced. Beyond Chilcas

towards Salto and Jujuy the work is still progressing, but there are many engineering difficulties to overcome, and not much has as yet been accomplished. The line from Buenos Ayres to Mercedes, which is a link of the Transandine Railway, is now completed and opened to traffic, thus giving a through line from Buenos Ayres as far as Mendoza. Work continues to progress on the link from Mendoza towards Valparaiso, Chili, some of the track having already been laid, and by the end of the year it is expected that the Uspallata Pass of the Andes will be reached. For the construction of the railway from Monte Caseros to Corrientes and Posadas in the Misiones the necessary materials are now being received, and the work has commenced. The new line from Rosario, via Sunchales, to Tucuman is being rapidly pushed forward, and the rails are laid for 50 or 60 miles beyond Sunchales.

The last session of the Argentine congress, in response to the recommendations of the president, made a very firm stand against the granting of any more charters or concessions with Government guaranties, and the fact that numerous applications were made for new lines without such guaranties shows that the condition of the country is now so promising that capital is ready to embark in such enterprises without Government aid. (Report by Consul Baker, Buenos Ayres, December 13, 1888.)

From the report of the South American commissioner I extract the following, dated June, 1885.

The effect of railroad building, which during the last few years has been very marked, seems to stimulate the raising of grain and the growth of flocks more than any other agricultural pursuit. The completed railroads embrace over 2,800 miles, and the extension of those lines now under construction amount to nearly 900 miles. There are projected, also, many thousand miles more, which in the course of time will be built. A railroad man (an American) describes this country in this respect as being in the condition of our country thirty years ago. The cost of building roads throughout Argentine is very little, so far as grading is concerned. Many of the lines had but little to do for long tangents except to lay down the rails on the even plains. At first some trouble was found on certain lines to provide stone for culverts and abutments, but afterwards plenty of good building rock was discovered. The cost of procuring ties is heavy, as they must be brought from the northern provinces or from Paraguay. Now a line of road is being constructed toward and through the Gran Chaco and the fine forest lands of the Republic. This extension is also designed to reach into Bolivia and its greatest timber tracts, thereby giving to that Republic an eastern outlet for its rich mines and agricultural products. The completion of this road will cheapen the cost of lumber to all the Republics, and open up an industry of great profit in the luxuriant forests of the Upper Parana and other streams. At present the largest cost to the estancia holders in fencing grows out of the scarcity of posts. The policy of inclosing all the pasture land of the owner is becoming universal, and the erection of corrals increases the expenses of a good estancia very materially, for they are made almost entirely of lumber imported from our country.

At present there is no coal found in this country, and the engines are all driven by fuel brought from Cardiff. This is a serious drawback to the railroads of the Republic. Those lines running toward the north can in time obtain wood from that region. But it will probably always be cheaper to import coal for the most of the roads than to rely upon the northern forests. There has been a recent discovery of petroleum in the western part of the Republic, in the province of Mendoza, and a company has been organized to develop the oil-producing districts, and many believe that near by will be found coal measures of considerable extent.

The railroads are in part owned and managed by the Government. If we trust the statement of Mr. Hopkins, herewith submitted, we find the result of this management to be here, as in Chili, very unsatisfactory; and great complaints are made at the high railroad charges of all the companies. But the cost of operating must be very serious, and no people ever think they are charged too little for railroad transportation; but all agree that new regions are being made accessible and great agricultural industries are being promoted by these modes of internal communication, though they are expensive.

The railroad map of the Republic shows how little of its territory has yet felt the beneficial effects of these arteries of commerce. Ten times its present railroad development would fail to bring the whole country into anything like close communication. But the fever of railroad building has touched the people, and in some way these needed lines will be pushed to completion. One gentleman observed that in many respects it was cheaper to build railroads than highways, of which there are very few, called cart roads, in the country. As yet the private railroads have been built almost wholly by English and French capital, but they were aided by liberal concessions from the Government lands, and a guaranty of a certain interest on the construction bonds, and these guaranties have not been called into force in but one instance, so remunerative have the investments proven.

THE FUTURE OF ARGENTINE.

From the interesting paper on the railroads of the Republic, by Mr. Russel R. Pealer, the lines and present roads and those in construction can be learned. The advantages of the country for American capital are pointed out, and probably a hint may be found in the projected Bolivian line of the future railroad which shall connect North and South America. We have met with no one familiar with the entire line, but at Montevideo we listened to a professor in a college there, who professed to have been over the route from the Isthmus south to Buenos Ayers. If he is correct, there are no insurmountable obstacles in the way of this colossal undertaking. The president of this Republic said on this point that his people would push their line up into Bolivia, and he hoped it would come in his day that one might take a car at Buenos Ayres and not change until he set foot in New York. Mr. Pealer's paper is replete with suggestions and worthy of the attention of our people. The drawback to an extensive system lies in the vast size of the estancias and, in consequence, the sparse population. The towns are far apart and so long as cattle and sheep are the chief industries the freight traffic can not be at all equal to what it would be with grain farming, and in neither case can it be what it would be were the land cut into small farms. The policy of selling the land by leagues—6,600 acres in a body—still prevails.

In a few days there will be opened to purchase by these large areas a wide tract of country lately taken from the Indians. To counteract this aggregation of lands in one ownership, the law of inheritance requires all estates to be divided among the children of the decedent and his widow in certain proportions; and it renders it impossible to defeat this end by any will or devise. But it is quite clear that, aside from this provision of the statute, the land must, in time, suffer division in all those regions where grain-raising shall be deemed more profitable than stock pursuits. This will result from the tendency among European laborers, on whom the country mainly relies, to become land-owners. They can afford to pay so much more for their small farms than the landlord can realize in any other way, so that he will find it to his interest to subdivide his estate. This tendency finds encouragement in the fact that the larger proportion of estancia-holders now reside in Buenos Ayres and other large towns, and have no attachment to the estates. Their city expenses and mode of life draw heavily on their country incomes. Habits of idleness fall upon their sons, few of whom take any lively interest in their fathers' estancias. The immigrant from Italy, the Basque provinces, or Germany, loves to till his own acres. The work the Basques accomplish, when on their own land, is continuous and very great. The Italian does not fall far behind. With the division of these estates will of course come a greater demand for railroads. The products from the sea-port markets will multiply. Already quite a supply of linseed comes to our country from the Argentine Republic, and we may look to a very diversified agriculture on these plains. While they are now treeless, yet they have been found to be well adapted to rearing forest growths, as well as many kinds of fruits, apples, pears, peaches, apricots, and most of our northern fruits are already abundant, while the northern regions furnish tropical productions in unlimited amounts; and this brings us to consider briefly the colossal development of the Republic and the people it is drawing hither.

RAILWAY SYSTEM OF THE ARGENTINE REPUBLIC.

[Statement of RUSSELL B. PEALER, of Buenos Ayres.]

In reply to your question as to what plans I have for the extension of the railroad system of this country into Paraguay and Bolivia to facilitate and increase our commercial relations, I shall as briefly as possible give you our opinion on the subject.

At present we are engaged on the construction of a railway line in the province of Entre Rios from "Puerto Echague," the head of ocean navigation on the Uruguay River to Concordia, the length of the line being 156 miles. From Concordia I propose extending our line through the provinces of Entre Rios and Corrientes into Misiones, to Posadas, the capital of that territory. From that point our intention is to extend the road into Paraguay, passing by Villa Rica and traversing the country between Asuncion and the limits of the southern boundary of Brazil, penetrating into Bolivia and continuing around toward the northern boundary of Peru and along into Ecuador, intercepting the Grand Intercontinental Railway, and forming the link that will connect it with the head of ocean navigation of the River Plate at Puerto Echague, on the Uruguay River.

The concession we have asked for and expect to obtain from the Paraguayan and Bolivian Governments: First, perpetuity; second, Government guaranty of 6 per cent. on the cost of \$40,000 per mile; the Government to grant us from 6 to 12 square leagues of land along the line.

As soon as the road is in operation these lands must naturally increase rapidly in value, and, though perhaps not worth more than \$1 per acre in the beginning, must advance to more than \$20 per acre in less than twenty years. This has been the history of all lands along the line of railways constructed in this country, and the same may be expected of them in Paraguay and Bolivia when railway facilities attract immigration and increase the industries.

At present the Government may not afford to pay more than half the guaranty, but as they develop by means of the enterprise and become enriched by the immense increase in value of their lands, they will soon be enabled to pay the 6 per cent. guaranty. The cost of these roads, with single track, will not exceed \$30,000 per mile, as we know of no engineering difficulties up to the northern boundary of Bolivia; nor would there be any should we go through the Amazon portion of Brazil. The principal streams will be crossed at their heads, where they are small, and branches from the trunk line be made to lead to the head of steam-boat navigation of the Orinoco, Amazon, and other important rivers to the Atlantic, then to connect with the steamers to and from the United States.

The western and southwestern portions of Brazil would be an important element to the railway and our river and ocean steamers. Besides a line of steamers to the River Plate, we would recommend a line to the Orinoco, and another to the Amazon to run in connection with the steamers on those rivers to our railway system.

When all this is done our people will hold and control the key of the trade with all this portion of South America, and solve the question of rapid communication and quick transit of commerce with these countries. If by sea our steamers can afford to carry merchandise as cheaply as do those of the Lamport and Holt line, they will undoubtedly get the most of it. Those of us here doing business with the United States find ourselves heavily handicapped by those in the European trade.

Merchandise from the United States takes double the time to reach here that goods do ordered from any part of Europe; and in view of the small proportion of vessels obtaining return cargoes, freights are much higher from the United States than from Europe by steamers, which, in addition to their freight, derive much of their profit from the carrying of passengers and emigrants.

The benefits to be derived from the direct communication with the United States as afforded by our trunk line of railway in connection with the grand intercontinental railway system projected by the United States people to connect North, Central, and South American countries, can not be overestimated, and must, in our opinion, have a most favorable influence upon the governments and the people of the republics.

The Argentine Republic already possesses the advantages of a direct trade with the United States and Europe to such an extent that her commerce is carried on as conveniently and advantageously as that of any other country; but it would be greatly increased by the construction of this great railroad enterprise, bringing down to the head of ocean navigation the products of the upper regions of the undeveloped countries, and affording a quick and economical means of conveying to them the imports brought to supply these countries.

In the mean time, to obtain some of the benefits referred to, we must have direct and prompt communication with the United States by means of steamers terminating their route at Buenos Ayres. Owing to the geographical position the Argentine Republic possesses every facility for carrying on its commerce. Paraguay, owing to its great distance from the sea-board, and Bolivia, from its distance inland and isolated position, may be considered as comparatively excluded from intercourse with the rest of the world at present.

All the wants of both these countries could be supplied from the United States, and the cost of bringing those supplies by means heretofore described. Paraguay pays one freight to the River Plate and twice as much more in addition from the River Plate to Asuncion. Bolivia, owing to its inland situation must now deprive itself of many things that it would consume, or have to submit to the heavy tax now paid for transportation over difficult overland mountainous country on the backs of mules. Railway communication would so far reduce the cost of carriage as to enable the populations of Bolivia and Paraguay to consume liberally many things manufactured in the United States of which they now have to do without.

We do not consider that the extension of the line of railways to Mendoza and Tucuman, also Jujuy, can have any effect upon diverting trade away from Bolivia and Peru to the Atlantic sea-board, because of the great extent of the mountainous country to be traversed between them, and because of the diversity of gauges of those roads and ours which would forbid the forming of a connection.

One gauge is 5 feet 6 inches and the other is 1 meter, while our projected line is the American standard gauge of 4 feet 8½ inches throughout.

In addition to the many articles of export from Paraguay and Bolivia, of which I shall make mention hereafter, I would now refer to the products of cattle as an important factor in the trade between the United States and those countries. In some

parts cattle are very abundant, and for want of an outlet have increased to such an extent that they can be bought for \$3 per head.

The opening of communication with Paraguay and Bolivia would enable them to find a market for the hides in the United States and the dried beef in Brazil, to the mutual benefit of the producers and the railways.

Herewith I beg to hand you a skeleton map of the Argentine Republic, showing the railways built and in operation, those now under construction, and those projected, the names of the companies, and which are owned by the national or provincial governments. This will give you a brief idea of the entire railway system of the Argentine Republic.

In addition to the map, I give you a list of all the railways in operation in the Republic, their gauge, ownership, and length; also, of those under construction.

The total number of miles of telegraph in operation is 18,000, all owned by the national government, and 2,000 miles more under construction. The only private line—owned by an English company—is that between this city and Montevideo, connected by a cable across the La Plata River, between Buenos Ayres and Colonia.

There is but one railroad in Paraguay, that being only 40 miles in length, and was built many years ago by the Dictator Lopez.

In the Republic of Bolivia there does not exist a single mile of railway.

All the railroads in the Argentine Republic are now paying from 7 to 14 per cent. (see quotations on railway stock of Argentine Republic, varying from 25 to 75 per cent. premium). All the roads when properly built and equipped, 50 per cent. of the gross earnings are more than sufficient for the working expenses, as the quality of the land for the road-beds is generally good, and no frost to contend with.

These railroads, built and owned by foreign companies, have had the benefit of a 6 per cent. Government guaranty, varying from £6,000 to £10,000 per mile. Of late years they have nearly thrown off the guaranty and paid back the Government such guaranty as was received during the early existence of the roads.

Most of the railway concessions are granted for perpetuity, and all material for building and equipping are allowed to be imported into the country free of duties, and are free of all internal taxes. All works that are considered public come under the same category.

These English companies have all amassed immense fortunes out of these railway enterprises and Government guaranties. We would here state that railway enterprises and other public works are still in their infancy, and I can only compare this country now to what the United States was some thirty years ago. Now is the time for the American people to get a foothold here, and, with their capital, control and monopolize the future public works of this great valley.

The people here will give preference to the Americans over any other nationality, and we can attain from them grants and concessions when no other people can. Formerly Americans have not been able to compete with other nationalities owing to the cheapness of money and material, but that day is now gone by and America can compete with both money and material against any European country. British capital and influence to control these countries is a thing of the past. They are not now, nor ever have been, congenial to the Latin races, and especially to the people of these republics. The greatest enemies and competitors the Americans have out here to contend with are the English.

This country has always faithfully paid up its obligations on all the public works as well as its national debt, and its credit stands to-day almost equal to that of the United States. Its progress is fast following that of our own.

These republics, when traversed with railways into their interior, will open out the great mineral wealth of the Cordillera slope.

Formerly this great valley was one vast grazing ground, principally for cattle, horses, sheep, and goats, etc. Animals live without shelter the year round, and it is not required to store food for the winter months, as done in the United States. Labor is cheap, owing to the abundance of meat, fish, game, fruit, and vegetables.

Owing to the immense European immigration these countries are fast developing into an agricultural region. It is one of the healthiest climates on the face of the earth; our average temperature in winter is 54 degrees, in summer 74 degrees, and seldom ever rises to 90 degrees.

List of railways in the Argentine Republic.

	Miles.
Central Argentine: Rosarios to Cordova, gauge 5 feet 6 inches (English company).....	248
Northern Central, gauge 3 feet 3½ inches (owned by National Government):	
Cordova to Tucuman.....	340
Tucuman to Metun (Salto).....	180
Frias to Santiago del Estero.....	100
Andine Railway, gauge 5 feet 6 inches (owned by National Government):	
Villa Maria to Mendoza.....	380
Mendoza to San Juan.....	100
East Argentine, gauge 4 feet 8½ inches (English company): Concordia to Monte	
Caseros.....	100
Campana Railway, gauge 5 feet 6 inches (English company): Buenos Ayres to	
Campana.....	40
Northern Railway, gauge 5 feet 6 inches (English company): Buenos Ayres to	
Tigre.....	18
Ensenada Railway, gauge 5 feet 6 inches (English company): Buenos Ayres to	
Ensenada.....	35
Southern Railway, gauge 5 feet 6 inches (English Company): Buenos Ayres	
to Bathia Blanca.....	636
Santa Fé Railway, gauge 3 feet 3½ inches (English company): Santa Fé to	
the Colonies.....	56
Western Railway, gauge 5 feet 6 inches (owned by the Government of Province	
of Buenos Ayres): Buenos Ayres to San Nicholas and branch to La Plata.....	610
	<hr/>
	2,843
	<hr/>

List of railways under construction.

	Miles.
Campana and Rosario, gauge 5 feet 6 inches (English company): Campana	
to Rosario.....	140
Entre Rios Eastern, gauge 4 feet 8½ inches (American company): Port Echague	
to Concordia.....	156
Transandine Railway, gauge 5 feet 6 inches (English company): Mercedes,	
Buenos Ayres to Villa Mercedes, San Luis.....	350
Entre Riano Railway, gauge 4 feet 8½ inches (owned by the Government of	
Province of Entre Rios): Parana to Concepcion.....	182
Central Northern Railway, Metan to Jujuy.....	62
	<hr/>
	890
	<hr/>

RECAPITULATION.

Ten railways in operation.....	2,843
Five railways under construction.....	890
	<hr/>
	3,733

URUGUAY.

The railways of Uruguay radiate from Montevideo and connect on the west and north with those of Argentine, Paraguay, and Brazil. There are now 400 miles constructed and much more projected, principally toward the Brazilian frontier.

A general railroad law was enacted in 1884, which named certain lines recommended by a commission of engineers as worthy of construction, and which named also the conditions which were to govern the granting of concessions and the construction of the lines. The gauge was to be 4 feet 8½ inches, and the minimum radius of curvature 400 meters. A guaranty of 7 per cent. per annum on about \$25,000 per mile was to accompany the concessions.

The lines named are shown upon the map accompanying the report of the delegate from Uruguay, but I believe some of them are not yet under construction.

Central Uruguay Railway Company of Montevideo.—Line of road authorized, Montevideo to Durazno; completed from Montevideo to Rio Negro, 170 miles. Branch: Santa Lucia to San José, 20 miles, total 190 miles. Opened from Montevideo to Santa

Lucia, 40 miles, in 1872, and to the present terminus in 1879. Extension to north bank of Rio Negro, 41 miles, opened July, 1885. The Government has granted a perpetual succession, with a guaranty of \$3,500 per mile attaching, as each separate section is opened. This company operates the line of the Uruguay Central and Hygueritas Railway Company, extending from the junction with the Central Uruguay at Juan Chaso to San José, 20 miles. The total authorized length of the latter line is 146 miles, Santa Lucia to Hygueritas, the Government also guarantying a net revenue of 7 per cent. on £10,000 pounds per mile (about \$50,000).

Central Uruguay Northern Extension Company, registered in London, October, 27, 1888, to acquire a concession from the Uruguayan Government for a line forming an extension of the system of the Central Uruguay Railway Company, of Montevideo, to the Brazilian frontier, a distance of about 288 kilometers (179 miles).

Northeastern Railway.—Projected from Montevideo to Artigas (on the Brazilian frontier); completed to Minas, 74 miles. The section to Pando, 18 miles, was completed in 1883.

Northwestern Railway.—From Salto to Santa Rosa and the Brazilian frontier, 111 miles, with a branch from Isla de Cabello to San Eugenio, 70 miles. Main line is completed and connects at its northern terminus with the Brazilian Great Southern Railroad from Uruguayana. The Uruguay road runs parallel to that from Concordia to Ceiba in Argentine.

Midland Uruguay Railway Company.—Projected line of road from Paso de los Toros to Salto, 174 miles. Registered in London under the Companies act, July 2, 1887, to acquire a concession granted by the Government of Uruguay. Under this concession the Government guaranties, for a period of forty years, commencing from the opening of each section of 50 kilometers, 7 per cent. per annum on a capital stock of £5,000 per kilometer.

Northern Railway and Tramway Company.—Montevideo to Santa Lucia, has 25 miles in operation.

PARAGUAY.

The railway from Asuncion to Paraguari, a distance of 45.2 miles (72 kilometers 417 meters), the first line constructed in South America, was built for Lopez during the year, 1861-'64 by the Englishmen Burrell, Valpy, and Thompson, with a force of 6,000 soldiers detailed for the purpose. It rested at Paraguari until recently, the war having stopped it midway on its course to Villa Rica, the proposed terminus. After many vicissitudes the building of the road has been resumed, and the new station, General Escobar, 11.20 miles (18 kilometers, 50 meters) beyond Paraguari, was opened last September. Work on the road-bed is being pushed, and a fine bridge across Tebicuari of 260 meters is in process of construction. It is expected that it will be completed to Villa Rica during the coming year, a distance from Asuncion of 91.48 miles (147 kilometers, 242 meters). A concession to further extend the railway to Encarnacion, on the Parana River, has been granted to certain parties, who are now in London negotiating its sale.

Trains run daily from Asuncion to Escobar and return, leaving the former at 6 o'clock a. m., arriving at Escobar at 12; leaving Escobar (returning) at 1 p. m., and arriving at Asuncion at 6 p. m. The old track to Paraguari has recently been thoroughly overhauled. New bridges and culverts have been built. There are four classes of cars. The first-class coaches, of Belgian make, are beautiful carriages, as fine in appearance as the best American coaches, and perhaps more ornate in their appointments. The second and third class coaches are plain, comfortable carriages. The fourth class are simple trucks without seats, but are very cheap, and certainly a great convenience to the poor Paraguayans, mainly women, who patronize it. First-class fare, about 4½ cents.

The railway traverses a very picturesque region. The orange and palm groves of Luque, the superb lake of Ipacari, stretching out to the foot of the Cordillera; the peak of Itagua, the valley of the Pirayu, the Cerro Batovi, and the bold heights about Paraguari form a pleasing landscape of considerable variety. The section now being extended to Villa Rica will pass over a still more charming country.

The number of passengers carried last year amounted to 257,688; amount of traffic, \$161,550. In 1881 the total number of passengers amounted to 81,807; total amount of traffic, \$62,207. The passengers and traffic returns for 1887 show a considerable

increase over those of 1886, in which year 120,865 persons were carried, and the traffic reached the sum of \$85,606.17.

In 1876 a survey was made for a railway, which was to start from a town called Curitiba, in the Brazilian province of Parana, near Paranagua, and run thence to Matto Grosso and Bolivia, thus placing Paraguay within five days of Rio de Janeiro.

The air of the River Plate is full of great railway enterprises just now, and new lines and gigantic combinations are projected in every direction. A late number of the Buenos Ayres Standard contains the following:

"Messrs. Clark & Co. have long planned a vast net-work of railway in the South American Continent, and the scheme for a line from Recife to the Pacific coast forms part of this bold plan. Such a line would eclipse the Panama Canal and rouse the wonder of the world. Rapid communication would be established between Australia and Europe, and immigration to the Pacific coast would be considerably facilitated. The lines which the Messrs. Clark are at present building from Monte Caseros to Corrientes, Posadas, and Misiones also form part of the vast plan alluded to and are intended to connect us with the transcontinental Brazilian line. The plans were roughly drawn up in 1886 by these fore-seeing and powerful railway kings. The first section, according to the plan, stretches from the Misiones territory as far as San Pablo, in a southwesterly direction from the lines at present in course of construction. At Curitiba a branch line would be built to Paranagua, on the Atlantic, and at San Pablo there would be a junction with the railway running to Rio Janeiro, or with that terminating in Santos. The second section, which runs in a more westerly direction, would be the prolongation northward of the Misiones line. It would incline gently eastward after crossing the province of Parana and San Pablo,* then continue to the west of Minas Geraes and Bahia, and terminate in Pernambuco.

"The third, an interoceanic section, would form a junction with the Transandine line. It would stretch from Villa Mercedes, in San Luis, through Villa Maria (as at present), Santa Fé, Esperanza, along the right bank of the Parana as far as Corrientes. It would then cross the river a little higher up and stretch to Asuncion, thence to Paragnari, Villa Rica, and other towns, and finally into Brazilian territory to Para, communicating, by means of a branch to Braganza, with the Atlantic. Such is the gigantic scheme which the Messrs. Clark have been planning since 1886. The Emperor Pedro is highly in favor of it and assured Mr. Matthew Clark in London that he would do everything in his power to assist him and his brother to carry out the greatest scheme of the age."

The often discussed project of a great international railway to run from Buenos Ayres, through Paraguay, Bolivia, Peru, and Ecuador to Bogota in Colombia, thence to coast, to Carthagena or Panama, on the Isthmus, has been ably and exhaustibly dealt with by Minister Bacon in a recent issue of the Consular Reports.

The Government in September, 1887, concluded the following agreement for the sale of the present line of railway with a view to its extension to Villa Encarnacion, on the Parana River:

"ARTICLE I. The executive is authorized to make arrangements with Dr. William Stewart for the sale of the railway from Asuncion to Villa Rica and all appurtenances for 2,100,000 hard dollars gold. The purchaser being to prolong the line to Villa Encarnacion.

* * * * *

"ARTICLE V. The executive concedes to Dr. William Stewart the right to build and work a railway from Villa Rica to Villa Encarnacion in accordance with the conditions specified in this law.

* * * * *

"ARTICLE VII. * * * The company is at liberty to build such branches as may be found necessary, without, however, having the privileges of a guaranty.

"ARTICLE VIII. The Government guaranties an annual interest of 6 per cent. on the capital sunk in this undertaking for twenty-years. The maximum cost per kilometer not to exceed 30,000 hard dollars gold. * * * Government to determine tariff so soon as net earnings exceed 12 per cent. per annum."

Dr. Stewart is now in London to effect the sale as projected, but has not succeeded in doing so up to this time. The railway has been reported as sold several times during the year. The matter is one of great moment to those interested in the country, and the fate of the "Stewart concession" has been closely watched. It is now reported that Dr. Stewart has asked the Government for an extension of three months' time; also that the Government does not feel inclined to accede to the request. I understand, further, that in case Dr. Stewart fails to place the concession in London a Belgian company stands ready to succeed in his rights in the matter. There is no doubt that the road will be extended soon by some company. (Report by Frank D. Hill, United States Consul, Asuncion, Paraguay, January 23, 1889.)

* Probably San Paulo.

This English company is pushing the construction of the work, which is to be finished to Encarnacion in 1892. It will connect with the road now being constructed from Monte Caseros to Posados in Argentine and will put Paraguay in rail connection with Montevideo and Buenos Ayres.

The receipts of the 45 miles in operation for 1888 were \$210,000, while for 1881 they were only \$61,207.

The entire line from Asuncion to Villa Rica was put in operation January, 1890.

Another great project has just been elaborated which will put Paraguay in communication with the eastern coast of South America. This line is to be called The Transcontinental Railway from Asuncion to Santos, and is to run from Asuncion to the northeastern frontier of Paraguay, where at the junction of the Sierra Mbaracayu with the Sierra Amamby, it will enter Brazil about the twenty-fourth parallel, which will be followed to Santos, the great port of San Paulo. Its length will be about 1,300 kilometers (806 miles).

BRAZIL.

This great country exhibits in the most marked degree the statement made in regard to the location of the mass of the population, for less than half the territory contains almost all the inhabitants. Omitting the provinces of Amazonas, Para, Matto Grosso, and Goyaz, comprising the interior, there remain 1,157,842 square miles, out of a total of 3,119,764 square miles, in which live 13,222,860 out of the 14,002,335 people, according to the estimate of 1888.

This fact can easily be explained from the physical features of the country. The Amazon, whose tributaries spread in all directions, traverses it from west to east, and between these water courses are vast plains covered so thickly with vegetation as to be almost impenetrable. Along the coast there are several ranges of hills with elevated lands between, and here is the mineral and agricultural wealth of the country. The table-land of Matto Grosso divides the waters of the Amazon and the La Plata, the sources of the latter rising within a very short distance of the Atlantic. The San Francisco River flows northeastward between two ranges.

RAILWAYS.

Transportation in the interior is carried on entirely by water, and along the coast by mules and railways, the majority of the latter being in the southeast, and one-fourth of the whole in the province of San Paulo. These railways were first built from the coast towards the interior and their length was limited by the distance of the mountains from the coast. Indeed, this is still true, for there are only two or three exceptions, the greatest being the Don Pedro Segundo Railway in the province of Rio de Janeiro, which runs parallel to the coast and some distance from it, and the Madeira and Mamore Railway, projected along the Madeira River, far in the interior, around the falls which form the only obstruction to navigation from the interior of Bolivia to the Atlantic Ocean.

In the south, connection is made with the railways of Argentine and Uruguay, but as the lines in Brazil are not united, traffic to these countries can not be carried on very extensively. Another project has been elaborated for a line from the city of San Paulo westward to Paraguay, and a line is under construction from Porto Alegre westward to Uruguayana. The Paraguay line will give communication between the most populous portions of Brazil and all of Paraguay. The line from Porto Alegre to Bagé might also be extended to the frontier of Uruguay.

A point to be noted is that railway communication northward in the eastern part of the country is almost impossible because of great size of the water-courses, and, consequently, traffic between the southeastern part of Brazil and Venezuela or Colombia will for many years be carried on by water.

In an extract from the Consular Reports of 1882 there is a report by Consular Agent Comsett, in which he refers to international lines of road.*

The principal Brazilian railways are the following:

Alagoas Railway, from Maceio to Imperatriz, 55 miles, along the valley of the Mundaú River in the province of Alagoas. Gauge, 1 meter. This company was organized in 1881 to build the line under the concession granted to Domingos Mortinho and Jacuimda Silva Leao. Road was opened December 3, 1884. The Government guaranties 7 per cent. per annum on maximum capital £512,212, and reserves rights of purchase. In 1885 a concession was obtained from the Provincial Government for the construction of a branch from the main line to the town of Assembleia, about 40 miles, and surveys have recently been completed. A dividend of $5\frac{1}{2}$ per cent. was paid from the Government guaranty.

Bahia and Minas Railway, from Carvellas to Aymore, 88 miles, and extension, 9.3 miles. This railway is now under construction to Philadelphia, 155.6 miles; gauge, 1 meter. It was built under a concession granted to M. F. Argolla, the construction having begun January 25, 1881; the road was opened to Aymore, November 9, 1882, and the extension in 1882.

Bahia and San Francisco Railway, from Bahia to Alagoinhas, 76.3 miles. Timbo branch, Alagoinhas to Timbo, 51.4 miles. Gauge, 5 feet 3 inches. This branch was opened for traffic March 30, 1887, and is a separate undertaking, the estimated cost was \$1,490,000, on which there is a government guaranty of 6 per cent.; the guaranty on the main line is 7 per cent. This is an English corporation.

Bahia and San Francisco Railway Extension.—Line of road, Alagoinhas to Villa Novada Rainha, 199.6 miles. Gauge, 1 meter. This line is owned by the provincial government of Bahia and forms an extension of the Bahia and San Francisco Railway, northwest from its terminus at Alagoinhas. In 1881, it was in operation from Alagoinhas to Santa Lucia, 112.2 miles. A continuation of this line is now under construction to Joazeiro on the San Francisco River.

Bananal, Rio de Janeiro Railway, from the Sandade station on the Dom Pedro II. line to Bananal, 19.2 miles; opened February 1, 1889.

Brazil Great Southern Railway, from Cnarim River, the dividing line between Uruguay and Brazil, to the town of Itague, on the Uruguay River, 110 miles, all in the province of the Rio Grande do Sul; line was opened for traffic December 31, 1888. It has a government guaranty of 6 per cent. on a capital of £675,000, with reservation of right to purchase after ninety years. It is owned by a British corporation.

Central Bahia Railway, province of Bahia, main line Sao Felix to Queimadinhos, 170 miles, branch, Cachoeira to Feira de Santa Anna, 15 miles. Gauge, 3 feet 6 inches. The construction was begun in 1880, and the line completed in sections; it was opened to Queimadinhos in December, 1885; there is a government guaranty of 7 per cent. on the capital, \$7,130,000, for thirty years. The line is projected to the San Francisco River, and stock has been issued for the construction of a branch line to Olhos and Agua. This line is owned by a British corporation.

Campos and Carangola Railway, from Campos to Porto Alegre, 101 miles, Patrocínio branch, 24.2 miles; Itabopoano branch, 13 miles; total completed, 117.2 miles. The main line is projected to Santo dos Tombos on the boundary line of the province of Minas Geraes. Gauge, 1 meter. Construction was begun in 1876, and the first section of the main line opened December, 1878; second October, 1882. This line has a government guaranty of 7 per cent. on \$3,375,000 capital for a period of thirty years, terminating March 20, 1905, and is owned by a Brazilian company chartered in 1872.

Companhia Bragantina, Campo Lempo station on the S. B. Railway to Braganza, 32.2 miles. Gauge, 1 meter. Construction and equipment to December 31, 1886, amounted to \$35,000 per mile.

* See page 161 for this report.

Companhia Estrada de Ferro Macaé e Campos.—Line of road from Campos to port of Imbetiba, 59.5 miles. This company has a concession from the provincial government of Rio de Janeiro.

Conde D'Eu Railway (province of Parahyba), from Parahyba to Independencia, 60 miles, branch from Cobé Junction to Pilar, 15 miles. Total, 75 miles. The following are projected: Extension of main line to Cabedello, 11.2 miles, to be constructed in one year, extension of branch to Inga, and construction of branch from Malungu to Alagoa Grande. Gauge, 1 meter. British corporation, organized in 1875. Construction was begun in 1882; the road opened to Molungu September, 1883, to Independencia June, 1884; branch line November, 1883. This line has a government guaranty of 7 per cent. per annum on maximum capital of \$3,375,000, with option of purchase. Loss on operating for year ending June 30, 1888, \$50,000.

Corcovada Railway, from Laranjeiras to Mount Corcovada, 2.5 miles.

Dom Pedro Segundo Railroad main line and branches in province of Rio Janeiro, etc., radiating from the city of Rio Janeiro to leading towns of the interior, connecting with all other important lines of railway in the province of Rio Janeiro, Espirito Santo, Minas Geraes, and San Paulo. Total length, 460 miles. Gauge, 5 feet 3 inches. This road was built and owned by the Imperial Government of Brazil and named after the Emperor Dom Pedro II. Its construction was begun in 1862, in which year 39 miles of main line were opened. Extensions and branches were opened from time to time and constructive operations are not yet closed.

Donna Theresa Christina Railway, from Laguna to Imbetiba and Tuberao (coal mines), province of Santa Catarina, 71.9 miles. Gauge, 1 meter. British corporation, organized in 1876. This line has a government guaranty on \$3,155,000 capital, with privilege of purchase.

Estrada de Ferro Baturite.—Line of road from Fortaleza, province of Ceara, to Canaã; total length, including branches to Alfandega from Maracanhã to Maranguape and the extension from Canaã to Baturite, 68.6 miles. Gauge, 1 meter. Owned by the provincial government of Ceara.

Estrada de Ferro de Cantagallo, from Niteroy to Rio Bonita and to Passagem via Macaço, with branch to Parahyba Corte and San José; total, 165 miles. Gauge, 1.1 meters. This road was owned by the provincial government of Rio de Janeiro, but was purchased in August, 1887, by the Leopoldino Railway Company.

Great Western of Brazil Railway Company, from Recife to Limeiro, 60 miles; branch from Nazareth to Timbauba, 27 miles; total, 87 miles. Gauge, 3 feet 3½ inches. The construction was begun in 1881, and the whole of the main line completed and opened in September, 1882. In 1886 the company undertook an extension to Timbauba without a government guaranty. This is a British corporation and has a government guaranty of 7 per cent. per annum on a capital of \$2,812,500, with option of purchase.

Imperial Brazilian Natal and Nova Cruz Railway Company.—Main line from Natal to Nova Cruz, 75 miles. Gauge, 3 feet 3½ inches. This line has a government guaranty of 7 per cent. per annum on a capital of \$3,091,500, with option of purchase after thirty years. It was operated in 1886 at a loss.

Itana Railway, from Jundiáhy to Piracicaba, 122.4 miles; branch from main line to Itn, 14 miles; total, 136.4 miles. Gauge, 1 meter. Extension to San Manoel projected. The road was opened in February, 1877. It has a guaranty of 7 per cent. by the provincial government of San Paulo.

Leopoldina Railway (province of Minas Geraes), from Porto Novo de Cunha (Junction Dom Pedro II Railroad) via Leopoldina and Sao Geraldo northwest. Total length of completed main line and branches, 184.1 miles; extensions and branches projected, 40.3 miles. Gauge, 1 meter. In August, 1887, this road purchased from the province of Rio de Janeiro the Cantagallo Railway, 165 miles, extending from Niteroy to Macuco in the province of Rio Janeiro.

Madeira and Mamore Railway, projected along the Madeira River, 205 miles, to carry

* There is published a very finely illustrated description of this road, a railway of perhaps finer construction than any other in South America.

traffic around the falls. A concession was granted by the Brazilian Government to G. E. Church, April 20, 1875, for the building of this road and granted bonds, etc., for the purpose. The estimated cost was about \$30,000 per mile.

Minas Central Railway of Brazil, under construction from a point of junction with the Dom Pedro Segundo Railroad, to the city of Pitangui on the San Francisco River, about 150 miles. The concession was granted by the government of the province of Minas Geraes, which guarantees an income of \$300,000 for thirty years from the construction of the line, and interest during construction; the company is also guaranteed a monopoly for fifty years, during which time no competing line can be built within 18 miles. This line is owned by a British corporation.

Minas and Rio Railway, from Cruzeiro (Junction Dom Pedro Segundo Railroad, Province of San Paulo) to Tres Coracoes (province of Minas Geraes), 105.4 miles. Gauge, 1 meter. This road was opened in 1884, and is owned by a British corporation registered in 1880, which has a government guaranty of 7 per cent. per annum on a maximum capital of about \$3,715,000, with option of purchase.

Mogyanna Railroad, from Campinas to Casa Branca, 173 miles, with branches from Jaguary to Amparo, 90 miles; Sertaochino to Ribiero Preto, 90 miles; Mogy to Penha, 13 miles, etc.; total, 341.6 miles. Under construction, 116.5 miles. Gauge, 1 meter. The line is divided into three sections, the first and second are open for traffic and the third is under construction. This line is owned by a Brazilian corporation.

Para and Braganca Railway (province of Para).—Line of road projected from Belem (or Para) to Braganca, 129.6 miles. Completed from Belem 36.6 miles; narrow gauge.

Paranagua and Caratiba Railroad (province of Paranagua), from Paranagua to Morretes, 68.8 miles. Gauge, 1 meter.

Paulo Alfonso Railway (province of Alagoas), from Piranhas to Jatoba, 71.9 miles, following the north bank of the San Francisco River. Gauge, 1 meter. Built and owned by provincial government of Alagoas; opened in August, 1883, and worked at a loss. Total cost, \$2,550,000.

Porto Alegre and New Hamburgo (Brazilian) Railway (province of São Pedro de Rio Grande do Sul), from Porte Alegre to New Hamburgo, 26.7 miles; gauge, 1 meter. This line is owned by a British corporation.

Recife and Caruaru Railway (province of Pernambuco), under construction from Recife westward to Caruaru, 68.2 miles; gauge, 1 meter; 47.1 miles are open for traffic.

Recife and São Francisco (Pernambuco), Railway from Cinco Pontas (city of Recife) to Una (or Palmares), 77.5 miles; gauge, 5 feet 3 inches. The construction of this line was begun in 1856 and completed in 1862. It has a Government guaranty of 7 per cent.

Recife and São Francisco (Pernambuco) Extension, from Una to Garanhuns, 90.5 miles, built and owned by the provincial government of Pernambuco. Constructed in 1882-85. Gauge, 1 meter.

Rio de Janeiro and Northern.—Concession granted by the Brazilian Government November 4, 1882, runs for seventy years, after which the railroad reverts to the Government. In 1888 an agreement was entered into for the purchase of the property of the Principe de Grao Para Railway Company, comprising 57 miles of road constructed, with 16 miles to be completed about August, 1889. This latter line of road extended from Manna to the city of Petropolis and thence to San José de Rio. A further extension to Entre Rios to connect with the Dom Pedro II Railroad is under construction.

Rio de Ouro Railway, from Quinta do Caja to Rio de Ouro, 33 miles, with branches to Iguaça, 7.4 miles; to Eageagerode Dentro, 933 meters; to Olairé Reis, 274 meters; total length of main line and branches, 40.4 miles. Owned by the Government and used for the purpose of conveying material for the works which supply the city of Rio de Janeiro with water. Gauge, 1 meter. Worked at a considerable loss.

San Paulo Brazilian Railway, from Santos to Jundiáhy, 86.2 miles; gauge, 5 feet 3 inches. The construction of this line was begun in 1860, and the line opened February, 1867. The total cost was about \$10,000,000. The company has a Government guaranty of 7 per cent. per annum on capital stock of \$13,250,000, with option of purchase.

San Paulo and Rio Janeiro Railway, from San Paulo to Cachoeira and junction with the Dom Pedro II Railway, 143.8 miles; gauge, 1 meter. The road was opened throughout July 8, 1877. The provincial government of San Paulo guaranties 7 per cent. per annum on \$6,000,000, with right to purchase. The due payment of this interest for thirty years is guarantied by the Brazilian Government.

Santo Amaro Railway, from city of Santo Amaro to Jacu, 22.3 miles; gauge, 1 meter. Owned by the provincial government of Bahia.

Santo Antonio de Padua Railway (province of Rio de Janeiro), from Lucca to Miracema, 57.6 miles. Sold to the C. E. F. Macahe and Campos. Gauge, 2 feet 11½ inches.

São Carlos de Pinhal Railway: 47.7 miles were opened May 2, 1883, and there is under construction 25.5 miles. Branch lines to Brotos and Jahn are under construction, and the Dane Corregas section of the latter branch was opened September 7, 1886. There is now completed in all 163.7 miles.

Sobral Railway (province of Ceara), from Camocim to Sobral, 80 miles. An extension of 61.2 miles to Ipu is projected. This road was built by the Government and was operated in 1884 at a loss.

Sorocabana Railway, from San Paulo to Tieté, 118 miles; gauge, 1 meter. An extension to Botucatu is in progress, and the Cerquiho Laranjal section of same was opened May 24, 1886. The road was opened to Tieté in 1885. This line is owned by a Brazilian corporation. Completed 137.6 miles.

Southern Brazilian Rio Grande do Sul Railway, from Rio Grande to Bagé, 173.6 miles; gauge, 1 meter. Line opened December, 1884. By the terms of the concession the Government guaranties for thirty years 7 per cent. per annum on a capital of \$7,605,000, with no competing line within 20 kilometers to be sanctioned for ninety years without the company's consent, but reserves the option of purchase after thirty years.

Taquary and Uruguayana Railway, projected to run from Taquary near Porto Alegre, due west to Uruguayana. From Taquary to Santa Maria 162.40 miles is already completed, between Santa Maria to Cacoquay 71.5 miles more under construction, leaving 164.5 miles yet to be constructed. Gauge, 1 meter. This line was operated in 1888 at a loss.

Unaio Valenciana Railway, Desengano to Rio Preto, 39 miles; gauge, 1.1 meter.

Western Railway of San Paulo (Companhia Paulista de Estrada de Ferro de Oeste), from Jundiáhy (junction San Paulo Railway) via Campinas to Belem do Descalvados, 125 miles, with branch from Condeiras via Rio Claro to the Mogy Gassu river at Pinhal, 26 miles; total, 151 miles. Gauge, 5 feet 3 inches. This road was built by a Brazilian corporation without the aid of foreign capital and its total cost was about \$32,500 per mile.

There are a number of other lines aggregating 526.6 miles, the most important being the *Oeste de Minas*, 125.2 miles in length. The others are given in the table.

PROJECTED RAILROADS IN SOUTH BRAZIL.

Having been handed a pamphlet upon the projected lines of railroad for the southern portion of Brazil, I have made copies thereof, one of which I inclose, thinking some of our railroad men might like to know what was going on in this part of South America.

The line from San Francisco, just north of this port passing here, thence to Porto Alegre, I believe, is in the hands of an English company, and they expect the final or third passage through the present house of deputies to take place in a few days, when work is to be commenced. The chart will otherwise explain itself.

[Translation.]

ON THE PROJECTED LINES OF RAILROAD IN THE SOUTHERN PORTION OF BRAZIL.

We will divide the execution of the plan of railways herein delineated in the southern part of Brazil into three classes, viz:

- (1) Lines of great necessity, "urgent," which we designate "primary."
- (2) Lines in continuation of the above, which we will term "secondary" lines.
- (3) Ultimately at a more remote period, as the increase of population will warrant, those we will denominate "final" lines of construction.

PRIMARY LINES.

- (1) From the best port in the province of Santa Catharina to the city of Porto Alegre, capital of the province of Rio Grande do Sul.
- (2) From the western part of Rio Grande do Sul. Porto Alegre to Uruguayana.
- (3) Alegrete to Quarahim.
- (4) In the southern part of the province of Rio Grande do Sul, from Porto Alegre to Jaguarão.

SECONDARY LINES.

- (1) From Sorocaba to the bay of San Francisco, province of Santa Catharina.
- (2) From San Francisco, province of Santa Catharina, to the two rivers San Antonio and Peperý-Guassú.
- (3) From São Gabriel to Jaguarão, passing through Bagé.
- (4) From Alegrete to São Borja.
- (5) From Bagé to the terminus of one of the eastern lines on the frontier.
- (6) From São Gabriel to Santa Anna do Livramento.

FINAL LINES OF CONSTRUCTION.

- (1) Those from the ports of Santos, Paranagua, and Desterro, in direction, respectively, of the Colony Donradas, Sete Quedas in Parane, Peperý-Guassu, and São Borja.

(2) The lines from São Gabriel, passing through Santa Maria da Boca da Monte, Passo Fundo, and near to the city of Goyaz, may take direction to a point on the right bank of the Amazon, between 9° and 17° long. W. of Rio de Janeiro. This will be the Central Brazilian line, at some point of which, when partially developed, is destined to be the future capital of Brazil.

The lines above mentioned are to run from the ports of Santos, Paranagua, Sao Francisco, and Desterro in direction west, crossing the future Brazilian central line. It is not impossible, or impracticable, that a line could be constructed running from the port of Valparaiso, taking an easterly course, and finding way over these several lines, to the South Atlantic coast.

In a petition we made to the Imperial Government in 1865, from Paris, we asserted, in order to give the province of Rio Grand do Sul a sure and available communication with the ocean, that it would be necessary to unite the capital by rail with the port of Santa Catharina, and that this line might serve as the common junction for the three great international lines, viz:

First. To bring the city of Montevideo within eighty hours from the imperial capital.

Second. To make the Santa Catharina line the terminus for the ports of the republic on the South Pacific coast.

Lastly. To bring the city of Ascuncion, capital of Paraguay, within four days distance from Rio de Janeiro.

By following this plan the result will be our having three railroad lines terminating at as many different points on the frontier of the Empire.

On account of the extraordinary progress developing within the States on the Pacific coast, thereby enlarging the field of our operations, there is a necessity for these lines to meet those from Cobija, Caldera, or Copiapo, which are in search of outlets, the nearest upon the Brazilian coast, thus establishing great interoceanic lines.

NOTE.—Within the zone embracing the province of Santa Catharina, between the general mountain range and the ocean, is where colonies have been established, which, under different headings, represent a sum of not less than \$60,000,000,000 expended by the general government with the intention of developing the interest of this zone. It is here the lands are located which were given to the Imperial Princess as dotal patrimony.

On this continent Washington and the future capital of Brazil, united by a complete system of railroads, shall form the two grand centers, both political and commercial, which shall be the regulator of ideas in this part of the globe.

As the United States of America employ all their efforts to foster through railroads their interest with those of Mexico and the British possessions, so Brazil, with equal energy, should nurse the aspirations of her people in unison with this interest with those of the various independent States on her border.

This we understand ought to be one of the principal objects of those charged with the destinies of the country.

If the traditional policy of Peter the Great of Russia, that the eagle of the Roman-ovs should extend its flight to the Bosphorus and the Bay of Bengal, that of Brazil ought to bind together intimately the different points of her possessions, and extend her influence to Cape Horn and the South Pacific.

The locomotive is destined to unite the two oceans which border the South American continent, assisted by the two grand water-courses, the Amazon and La Plata. (Report by Consular Agent Comsett, of Desterro, September 10, 1882.)

RAILROADS AND STEAM-SHIPS OF SOUTHERN BRAZIL.

In this province, São Pedro do Rio Grande do Sul, there are at present three railways in operation, and one or two other lines projected for which preliminary surveys have been made.

The lines in operation are, first, Estrada de Ferro do Rio Grande á Bagé, opened for traffic on December 2, 1884; second, Estrada de Ferro de Porto Alegre á Uruguaiana, opened in March, 1883, and third, Estrada de Ferro de Porto Alegre á Nova Hamburgo, opened in 1875.

The first line runs from the city of Rio Grande do Sul, in the southern part of the province, along the low sandy shores of Lagoa dos Patos to Pelotas, a city of over 10,000 inhabitants, distant 52.5 kilometers (32.6 miles); from thence almost due west to Bagé, the present terminus—a total distance from Rio Grande do Sul of 280.2 kilometers, or 174 English miles, and within 80 miles of the boundary line between the Republic of Uruguay and the Empire of Brazil.

The road is substantially built; has a gauge of 1 meter, or 1.09 yards, and is laid with heavy T rails, of English manufacture, on hard-wood sleepers, secured with spikes, and ends joined with fish-plates and bolts. It was built, and is at present owned and operated, by an English company. The locomotives are from the famous Baldwin Locomotive Works in the United States, of the "Mogul" pattern, burning Cardiff coal and patent fuel, which is simply very fine coal mixed with some resinous substance and pressed into hard blocks. Passenger coaches are of two classes; those for the first-class passengers were made in the United States and on the American plan, and those for second-class passengers were made in Europe, but on the same plan as the first-class coaches. The traffic, or freight cars are of Brazilian make, being light and short, mounted on a single truck at each end. It is expected to extend this road to the Brazilian boundary.

The latest published official returns showing the receipts and expenses of the road are for the year 1886, in which year its receipts were, reduced to United States currency, \$329,645, and expenses, including improvements, \$306,364, leaving an unexpended balance of \$23,281. In that year it carried 105,465 passengers of all classes, and 20,735 tons of freight. First-class passenger rates from Rio Grande to Bagé are \$10; round trip, \$15. Freight is divided into five classes under the tariff list of the company. For first-class freight the charge is \$28 per ton from Rio Grande to Bagé, and for fifth-class, \$6.70 per ton. The road was built at an average cost of \$37,000 per mile, under a guaranty by the Brazilian Government of 7 per cent. per annum on the capital stock subscribed; provided, however, so much is expended annually in extending the line or on improvements of the line already built by the company, which improvements are under the control and direction of the Government's agents, termed fiscal engineers.

If the operating expenses should exceed the receipts, the 7 per cent. guaranty by the Government is first applied to the payment of that deficit, and if not sufficient to discharge it, the Government's responsibility extends no further. A number of subscribers to the capital stock were under the impression that the guaranty of 7 per cent. per annum by the Brazilian Government was unconditional, but they have since learned differently; for last year a dividend of 5 per cent. only was declared, which is practically a deficit of 2 per cent. on the gross receipts of the road.

The second road, when completed, will run from Porto Alegre, the capital of the province, in the central eastern part to Uruguaiana, on the Uruguay River, a distance of 378 miles. However, it is not completed over two-thirds of the way, the work of track-laying progressing slowly. This is the central road of the province, dividing it east and west into two nearly equal parts, and when completed will con-

nect the capital, a city of 40,000 inhabitants, with the Argentine Confederation at Uruguayana, where the Brazilian Government has a custom-house. It is owned and operated by the Government and is 1 meter in gauge. I know nothing of the engines and cars.

The receipts for the fiscal year 1886 of this road were \$219,063; expenses, \$254,310, leaving a deficit of \$35,247; number of passengers, 40,515; freight, 34,701 tons.

The third and last line in operation is a short one, 26 miles in length, connecting the capital with New Hamburg, a large German settlement. It is owned by an English company, and in 1886 had a deficit of \$1,878 but I am informed that under its recent management it will pay a small dividend this year.

Some time since a survey was made by the Government for a road from Porto Alegre to the port of São Francisco, in the province of Santa Catharina, the object of which was to give an outlet to the sea for the northern and western part of the province without passing through Lago dos Patos over the Rio Grande bar. This survey has been retracted by the Government, as the road it now operates does not pay expenses.

The sum of \$100,000 has been subscribed by citizens of this city and Pelotas for the building of a steam tramway running from the suburbs of this city to the sea-shore, a distance of 11 miles, where extensive grounds will be arranged for a pleasure resort. This road will be built, the name of the company being Companhia de Binds suburbanos de Mangueira. (Report of Lebbeus G. Bennington, consul at Rio Grande do Sul, July 9, 1888.)

BRAZILIAN RAILROADS.

At the close of the year 1887 there were in operation in Brazil 5,222 miles of railroad, of which 1,251 belonged to the general government, 59 to provincial governments, and 3,912 to companies and individuals. Of the last named, 1,340 miles were built without assistance from the general or provincial governments. The provincial governments aided, either by subsidies or by guarantying interest on the capital invested, in the construction of 972 miles, and the general government is responsible for interest on the capital invested in 1,600 miles.

At the same time there were in construction 870 miles of railway, of which about 450 miles it is estimated have since been completed, making the total length of the railways in operation in Brazil nearly 5,700 miles.

Nearly one-fourth of the total mileage is in the province of São Paulo, and it is in this province that railroads are most prosperous. At the close of 1886 there were in the province eight railroads whose total length was 1,124 miles, besides a part of the principal government road, the D. Pedro II. The cost of building these eight roads was \$49,498,000. Up to that time the general government had expended on them in the form of guaranteed interest the sum of \$7,364,040, of which \$2,473,420 had been repaid. The provincial government had expended \$3,752,185, the amount repaid being \$234,403. The operating expenses of the eight roads in 1886 were \$4,263,252, and the receipts \$8,399,595.

Outside of the province of São Paulo there are few prosperous railroads in the Empire. Of those belonging to the Government the only one that pays a reasonable interest on the capital invested in it is the D. Pedro II. This road, which in 1886 was 463 miles long, had cost up to that time \$53,833,000. In that year the operating expenses of the road were \$3,534,082 and the receipts \$6,304,983.

On none of the other Government roads were the receipts that year sufficient to pay operating expenses. These expenses amounted to \$1,112,370, while the receipts were only \$773,450. The cost of these roads, which were at that time 704 miles long, was \$48,180,000.

Of the roads receiving Government aid there are some which have drawn from the State in guaranteed interest a larger sum than the original cost of construction. These roads, which in 1886 were 1,445 miles long, had cost up to that time \$94,113,000. At the close of 1887, when the length of these roads (seventeen in number) was, as has already been stated, 1,600 miles, the companies owning them had received from the Government in guaranteed interest the sum of \$61,757,828.

From these figures it will be seen that the large increase in the annual expenditures of the Government and, consequently, in the public debt and the burdens of taxation is partly due to the liabilities incurred in promoting the construction of Government and assisted railroads.

On the other hand, it is undoubtedly true that the railroads so constructed have contributed to stimulate production, promote progress, and increase the annual revenue of the Government.

The data of which I have made use in treating of railroads had to be drawn from various sources, there being no single work in which recent and complete information can be obtained. This remark applies with still greater force to the statistics

of manufacturing industry in this country. (Report by Consul-General Armstrong, Rio Janeiro, June 1, 1889.)

Under date of August 31, 1889, Consul Borstel, of Pernambuco, reports that the contract to build a new railroad in the province of Piauh, in this consular district, has been awarded to Dr. Newton Coyer Bustlamaqui, a Brazilian. This line will be narrow-gauge, and will begin in the city of Amarante, a small sea-port town in the above-named province, and run to the sierra called Dais Amaas, or Two Brothers, in the same province, a distance of 700 kilometers, or 140 leagues. Dr. Bustlamaqui has an additional contract to carry on the line from the said sierra to the city of Petrolina, on the banks of the River San Francisco, in the province of Pernambuco, a distance of 200 kilometers, or 40 leagues. This is the same line of which some meager account was sent in my dispatch No. 33, of April 14, 1888. The estimated cost of the line is \$12,000 per kilometer, or close to \$10,000,000 for the whole line. The Government guaranteed 6 per cent. yearly upon the capital expended until the line is finished to its satisfaction.

BRITISH GUIANA.

Demarara Railway, from Georgetown to Mahaica, 20 miles. This line is owned by a British corporation organized in 1845. The road was completed and opened throughout its entire length, September 1, 1864, and has a gauge of 4 feet 8½ inches. The net earnings for 1888 were \$67,145.

THE INTERCONTINENTAL RAILWAY.

The idea of an intercontinental railway was given prominence some years ago by Mr. Helper in his book, the "Three Americas Railway," containing some essays written upon the subject at his request. The Commission appointed under act of Congress approved July 7, 1884, "to ascertain and report on the best modes of securing more intimate international and commercial relations between the United States and the several countries of Central and South America," made inquiries in those countries in regard to the feasibility of such a line. Their report, published in 1885 and 1886, contains much valuable information.

An interesting contribution to this subject was also made by John E. Bacon, United States minister to Uruguay. He discusses the feasibility of the line, and names several general routes which might be followed. His report is published in "Trade and Transportation," by William E. Curtis (Government publication), and in volume 26 Consular Reports, State Department.

Summing up the detailed information it is seen that much has already been accomplished in the direction of an intercontinental railway.

A glance at the map of the Western Hemisphere will show that in the north the railways of the United States extend east and west, north and south; they join those of Mexico at several points, and extend in several lines southward to the City of Mexico, whence lines have been projected to the boundary of Central America, and one is under construction. Again, in South America, railways cover the southern part in all directions, converge northward and proceed onward in a single line.

The railway systems of the United States reach the frontier at four points: Nogales, El Paso, Eagle Pass, and Laredo.

At Nogales, the Sonora road extends to Guaymas, from which point another line is projected southward along the Pacific coast, as far as Mazatlan, and indeed to Guerrero, which would eventually connect it with the City of Mexico. From El Paso which is 2,456 miles from New York and 1,236 from San Francisco, the Mexican Central Railroad goes 1,224 miles to the City of Mexico. From Eagle Pass, 2,083 miles from New York and 1,819 miles from San Francisco, the Mexican International to Torreon on the Mexican Central, 384 miles, and thence to the City of Mexico, in all 1,091 miles, and from Laredo, 2,187 miles from New York, the Mexican National, 839 miles to the City of Mexico.

The City of Mexico may then be taken as another starting point.

The Mexican Southern has been projected from the City of Mexico through Puebla, Tehuacan, Oaxaca, etc., to Tehuantepec, and thence along the coast to the frontier of Guatemala, 763 miles. A line is already in operation 183 miles south of the City of Mexico, and the line above mentioned is under construction. A great portion is already surveyed, the remainder will soon be located, and it is believed that the construction will be completed at no distant day. A branch was projected from Tonalá to San Cristobal. That this route has been chosen to reach Central America would seem to show that it is the best. It reaches the population where it is densest around Oaxaca, and it goes from there along the route easiest of construction except perhaps for the numerous bridges required from Tehuantepec southward along the coast. The elevation, gradually increasing from Tehuantepec, would reach at Tapachula about 1,000 feet.

From the City of Mexico there is another route. The Mexican Railway may be taken to Vera Cruz, 263 miles, and then the Alvarado road to Alvarado, 34 miles, or 297 in all. This latter road has a concession for an extension to the Isthmus of Tehuantepec. The Continental Railway, projected from Matamoros along the Gulf coast, will also follow this route south of Vera Cruz. None of this latter line has been surveyed, but for a portion of the distance there is a level strip of land between the coast and the mountains which would permit of a railway, yet the mountains at places approach the coast very closely. From Alvarado to Minatitlan, on the Isthmus, would be about 110 miles. At this point the Tehuantepec Railway might be used to Tehuantepec, or a southeasterly direction, following the cart roads into the interior to the city of San Cristobal, 200 miles further, or 607 miles in all from the City of Mexico, and from that point the same general direction to the frontier of Guatemala. The heights on the Isthmus are moderate, but the country to the eastward has not been surveyed. As an alternative line, this would not be any more difficult of construction than the Mexican Southern; that its length is less makes its worthy of consideration, and being in the interior, it would have a healthier situation.

The coast may still be followed by the first route through the State of Guatemala. It is said that a survey is being made for a line from Guatemala City to connect with the road from Tonalá, but it has not been announced yet what route it will take, however, it is probable that it will follow the coast, gradually ascending from Tapachula to Retalhuleu, meeting the railway from Champerico, thence to Escuintla, 1,450 feet above the sea, which is a point on the railway from San José to Guatemala City. Contracts have recently been made for the extension of this latter line to Santo Tomas, making it a means of interoceanic communication. The distance from Tapachula to Escuintla is about 145 miles.

From Escuintla the line may again follow the coast through the State of Salvador to San Miguel or La Union, the distance to the latter point being about 218 miles, but there are few inhabitants along the coast, and branches would have to be built to the capital and other important cities; hence it would be better to go at once from Escuintla to San Salvador 126 miles, crossing the railroad from Acajutla to Santa Ana at Sonsonate, then the high land can be followed through the important cities of Cojutepeque and San Vicente to San Miguel. Such a line would reach the greater portion of the population and would be in a healthy location. The grades would not be too heavy, as shown by the elevations determined by the French expedition. The traffic of the country is carried by the cart roads along about the same route. From San Salvador to San Miguel is above 90 miles.

Taking up again the interior route at San Cristobal in Mexico, a general southeasterly direction might be taken to Totonicapan, Solola and Guatemala City, a total of about 205 miles from San Cristobal. While this route reaches the mass of the population and the fertile regions, yet the topography is such as to make construction difficult. It is mountainous, the spurs or chains running in a direction almost perpendicular to the line, with deep valleys between. However, it is again to be noticed that the distance is apparently less from the City of Mexico than by the coast route.

From Guatemala City the line may then proceed by the shortest route to the city of Santa Ana and San Salvador, whence the route previously described may be followed, or the line may go from Guatemala City to Jutiapa, and thence down the valley of the Lempa in a general direction parallel to the coast, with branches to the principal cities. Such a railroad has been spoken of by the capitalists of Salvador and has indeed been projected. A line is said to be under construction from San Miguel to La Union, which is no doubt part of the general project. The distance through this State is about 170 miles.

From San Miguel the line may go directly west over almost level ground to the river Goascoran, crossing the projected Honduras Interoceanic Railway for which surveys were made as long ago as 1853, and which clearly show the nature of the country in this vicinity.

The surveys for the Nicaragua Canal have covered the territory in the western part of the State of Nicaragua, and these show to the country be very favorable for railway building.

Here again there is a large proportion of the population in the cities of Leon, Managua, Granada, Rivas, etc. The Nicaragua Railway having a general direction parallel to the coast may be used in the through line. At the Goascoran, the line will be about at sea-level and little change in elevation will be required from this point almost to the Isthmus of Panama.

Crossing the Goascoran, the line will skirt the Gulf of Fonseca, passing through the State of Honduras, the town of Choluteca, crossing the Rio Negro, and thence to the nearest point, Chinandega, of the Nicaragua Railway. The distance through Honduras will be about 90 miles to Chinandega, or about 120 miles from San Miguel. The Nicaraguan Railway consists of two sections, 58 miles and 32 miles each in length, communication between them being carried on by a line of steam-boats on Lake Managua, but they could easily be united by a line of railway. About 45 miles only of the first section can be used in the through line from Chinandega to Momotombo. From Granada, the southern terminus of the Nicaragua Railway, the Intercontinental line would then follow the shores of Lake Nicaragua to the city of Rivas (or Nicaragua), 150 miles from Chinandega, and still following the lake would cross the frontier line of Costa Rica.

Here the question arises as to whether the Pacific or the Atlantic slope should be followed. It is reported that a syndicate has been formed to build a line from Jimenez, on the Costa Rica Railway, northwestward to the mouth of the San Carlos River, and that the concession has been granted by the government. A concession has been granted very recently for another line from Esparta northwestward to the Nicaragua boundary. The general line may take either of these: the Atlantic or the Pacific coast being followed to the isthmus, or the Pacific coast to Esparta, thence across the State by the line now almost completed to Matina and from there south along the Atlantic coast.

While the latter would pass through the most populous region, it would be longer than either of the others, and the grades of the Costa Rica Railway are heavy. The distance from the northern to the southern boundary is the same by either of the other routes, but it is believed that the Atlantic slope is richer both in agricultural and mineral productions, and hence would no doubt be better for the through line. From the Nicaragua boundary the line would reach the nearest point of the San Carlos line, thence to Jimenez on the Costa Rica Railway, thence to Matina, and southward along the coast. From the southern terminus of the Nicaraguan Railway to Jimenez is about 210 miles, of which about 75 miles will be along the San Carlos line. From Jimenez to Matina is about 33 miles, and from Matina, to the frontier about 130 miles.

Thus to carry communication through Central America from the City of Mexico requires about 1,700 miles of railway, of which 293 miles are already constructed and in operation, 780 miles are under construction and survey, and 625 remain still to be located. The figures for the line through the interior are slightly different, but in each case they can only be approximate on account of the inaccuracy of the maps. Few surveys have been made, and those are confined to some route proposed for a railway or a canal.

The elevations, as has been said, from San Miguel in Salvador, all the way to the southern boundary of Costa Rica, do not change much, and hence the grades will probably be light. There are a number of rivers, but it is believed that none of them would require long or expensive bridges. The engineer's estimates for the Costa Rica Railway were \$37,500 per mile, and this in the difficult part; hence the average cost of the International line from the City of Mexico through Central America would probably be no greater. The traffic which it would reach would undoubtedly be remunerative, for all these countries are very rich both in agricultural and mineral resources.

By a glance at the map of South America it will be seen that its railways lie upon the outer border, with the exception perhaps of the projected line around the rapids of the Madeira River. In the south the railways of Chili, Argentine, Uruguay and Paraguay, and Brazil are already so united, or soon to be united, as to form great systems. Lines also have been projected in Peru and Bolivia which will eventually unite with those south of them, carrying rail communication as far north as Cuzco, in Peru, about 2,189 miles from Buenos Ayres. North of this little has been done that will be of use in the Intercontinental line.

Taking up the line at the boundary of Costa Rica, it must from there traverse the Isthmus of Panama to reach the commerce of the southern continent. Very little is known of the topography of the isthmus beyond a few miles on either side of the routes surveyed for interoceanic canals. However, these indicate that grades need not be difficult—although the experience of the Panama Railroad would show that there are many other difficulties to be overcome. The important point in this locality is, therefore, the saving of distance. The line, beginning on the north side, will at some convenient point cross to the south side, thence by the shortest distance to Quibdo, or some other convenient point in Colombia. Surveys may show that it is better to follow the north side of the isthmus. In any case the road must be built in the foot-hills to avoid the numerous water-courses and the low and marshy lands.

Having reached the Continent, there are several general routes open for choice, which for convenience will be called:

- (1) The coast.
- (2) The eastern slope of the Andes.
- (3) The interior.
- (4) The central plateau.

No. 1. The Andes in the north approach very near to the Pacific; the coast, except in the south, is thinly inhabited, and is not the productive area of the continent, and hence would be unfavorable, except perhaps from the city of Guayaquil in Ecuador southward. Even upon this part there are objections to the selection of this route because of the proximity of water transportation and because the central plateau and the eastern slopes of the Andes are the populous and fertile regions of this portion of the continent. Yet it will be noticed that the Chilian railways form an almost unbroken line for 1,500 miles, and that Peru has numerous short lines which might be united. The coast line would be beneficial when these countries become more thickly settled and better developed.

No. 2. The line may be carried to the eastern slopes of the Andes and thence southward, but it would traverse a country without roads and with few inhabitants—a country thickly covered with forests and crossed by many streams, along which communication is maintained to the foot of the Cordilleras from which trails lead to the plateau. While this line would pass through a rich country where traffic might possibly be developed, yet difficulties of construction or even of location seem to be such as to render it almost impossible. If the line, however, is so located it should follow the dividing line of two water-sheds, cross the Amazon, and then take its course toward the northernmost point of the systems of the countries to the south, most likely Cuzco or Cerro de Pasco in Peru. At the latter of these there is a pass in the Cordillera through which traffic passes to reach the head of navigation in the Amazon. The line would thus descend from an elevation of about 12,000 feet in Colombia to 400 feet on the Amazon and ascend again to about 11,000 feet at Cerro de Pasco or Cuzco.

No. 3. The interior route, on account of the immense breadth of the rivers, their number, the density of the forests, and the lack of population, is almost out of the question. While this country is undoubtedly very fertile it is almost entirely unknown; but when it becomes known and more thickly settled this route would be valuable, because it reaches in the shortest distance the populated regions of the southeast.

No. 4. There remains, then, the route by the central plateau, against which fewer objections seem to exist than against any of the others. It would reach throughout its length the most thickly settled portion of the continent; it would reach all its mineral wealth and connect with nearly all the railways so far projected, and besides there are but a few points where great difficulty would be found in the location. One of these has already been mentioned, near Popayan in Colombia; another is between Pasto and Ibarra in Ecuador, and another near Loja in Ecuador, all caused by lateral ridges of the Andes. One of these might be avoided by crossing the Cordillera in Ecuador to Macas, thence south along the eastern slope to Moyobamba, and thence to Cerro de Pasco.

The line through Colombia may follow two routes: The valley of the Cauca or the valley of the Magdalena. The Cauca Valley is more fertile and thickly inhabited, and being nearer to the Isthmus will require less construction than the intercontinental line. It may, however, be deemed desirable to reach Bogotá, the capital, which might be done by a branch, the main line being carried along the Cauca. A branch might also be extended to Venezuela. The Antioquia Railway, already partly constructed, could be used as part of it. The Cauca Valley is spoken of more favorably by Colombians than the Magdalena, although lines to Bogotá have been projected and a French syndicate is endeavoring to obtain a concession for this. Whichever valley is followed, a portion of Colombia is reached about which very little is known. The old Spanish road extends from Popayan, at the head of the Cauca, southward along the central plateau, but nothing is known about the country southward from the Magdalena across the Cordilleras. This is one difficult portion of the proposed line, and how difficult it is impossible to estimate.

The line may then be described as follows: Leaving Quibdo in Colombia, the Cauca Valley would be entered at the first available opening in the Cordillera, and would be followed with an ascending grade to Buga, Cartago and Popayan; then, crossing the lateral ridge, enter the plateau proper, passing through Pasto and Ibarra to Quito. A railway has been projected to this point from Sibambe, 150 miles south, to which point the line from Guayaquil is now being constructed. From Sibambe the through line may go to Cuenca and Loja, thence into Peru and the valley of the Marañon, and to Cerro de Pasco, where it will meet the line projected from Oroya. From some point on this line a branch is projected to Jauja, from which the Intercontinental Railway will go by the best route to Cuzco, where it will join the Mollendo, Arequipa and Puno Railway, of which a portion only has been constructed. When completed this line may be taken to Puno, from whence another line has been projected to La Paz in Bolivia. The portion of the Puno road referred to is about 92 miles in length, from La Paz a line is projected to Oruro and Huanchaca, from which point the projected line goes in two directions—one towards Antofagasta, the other southward to meet the Argentine line from Jujuy. The line from Antofagasta is under construction towards Huanchaca and the greater portion is built. The line from Jujuy is now within 120 miles of the Bolivian frontier.

The distances can be only approximately determined, except in the southern part. By measurement upon the maps I have obtained the following: From the frontier of Costa Rica through Quibdo the Cauca Valley and Popayan to Quito is about 985 miles; from Quito to Cerro de Pasco is about 805 miles; from Cerro de Pasco to Cuzco is about 350 miles; from Cuzco to Puno is 272 miles, Puno to La Paz 162. La Paz to Potosi 342, Potosi to Jujuy 420, Jujuy to Buenos Ayres 993, or from Cuzco to Buenos Ayres 2,189 miles.

From Cuzco in Peru to the railways of Costa Rica, about 2,300 miles, is the one long link which the Intercontinental line will be called upon to construct, for from Cuzco south to Buenos Ayres or Valparaiso it will be seen that railways are already built or projected.

The general elevation will be about 7,000 or 8,000 feet above the level of the sea. It rises in the Cauca Valley to perhaps 14,000 feet, sinks again in Ecuador,

rising to pass the lateral sierras, reaches its lowest level at the Marañon, and rises again to reach the great table-land of Bolivia.

To sum up: From the southern terminus of the railways in operation in Mexico to the northern terminus of the Argentine system is about 4,900 miles. In this distance there are already constructed about 230 miles which can be used in the through line, 1,800 miles are under construction and survey, and there remain 2,870 miles to be located in order to complete the line that will eventually unite the republics of the Western Hemisphere.

A more accurate statement of the location can not be made from present knowledge of the subject. Surveys are necessary; general, in order to give a more complete idea of the topography, and particular for the exact location of the line. Much of the country to be traversed is unknown; of the rest but few surveys have been undertaken.

A branch line has been projected in Bolivia from Oruro to Cochabamba. A line has been projected from Santa Cruz to the Paraguay. If these are built with a connection between Cochabamba and Santa Cruz, the commerce of Paraguay and Brazil will be reached. The line from the Paraguay is to go to Sucre, and might be extended to Potosi and Uyuni, joining at that point the Bolivian railways.

The route by the central plateau touches a number of transandine lines: The Cauca Railway, in Colombia, from Buenaventura to Cali, partly completed; the railway in Ecuador from Guayaquil to Sibambe, soon to be completed; the Oroya and Arequipa lines in Peru, now complete; and the Antofagasta and the Valparaiso lines, approaching completion.

Another route for the intercontinental line deserves mention. The Brazilian railways cover, more or less, the eastern coast of the continent. If these were joined and carried northward they would approach the Amazon. The Venezuelan lines are being connected with each other and are projected toward the interior. The Orinoco and the Amazon then form the only barrier between the railways of Venezuela and those of Brazil, but one which may almost be considered impassable.

SURVEYS.

It was stated that the information relating to the topography of the Spanish American countries is very limited. This is true of all these countries with perhaps one or two exceptions. Much of their area is unexplored, and few general surveys have ever been undertaken. Maps of each country are published, but they are on small scales, they differ greatly among themselves, and few are reliable, as the records of travelers show. A far better idea of the topography is obtained by reading books of travel; even this information is to be taken cautiously unless the writer is accustomed to accurate observation, consequently only general ideas can be formed of this portion of the Western Hemisphere.

The exceptions are where surveys have been undertaken for some particular purpose as a railway or interoceanic canal. It may be safely said of these, however, that little is known beyond ten miles on either side of the canal or railway line, and especially is this true of the canal lines, where the object was not a topographical survey, but merely the finding of a single line, which might be used for a canal. Some parts of these countries are inhabited by Indian tribes hostile to foreigners, other parts are sterile and bleak thus discouraging travel.

The lack of topographical information may be supplied by general surveys. This is done in the older and more thickly settled countries in various ways.

ORGANIZATIONS.*

In Great Britain the survey is called the ordnance survey, and is carried on by officers of the royal engineers, Lieut. Gen. Sir Henry James having been for many years at its head. December 31, 1874, there were employed on it 19 officers of royal engineers; 4 companies of royal engineers containing 121 non-commissioned officers, 243 sappers and 8 buglers, 1,000 civil assistants of different grades, and 448 laborers.

In Prussia the trigonometrical, topographical, and chartographical work is intrusted to the staff corps of the army, while the geodetic work in connection with the "European measurement of degrees" is in charge of the Geodetic Institute, whose head is Lieut. Gen. J. J. Baeyer. In 1875, 43 staff officers were employed on the survey, together with a large number of gunners, civil assistants, and laborers.

In Austria, the survey of the empire is intrusted to the Military Geographical Institute, an organization which has a general at its head and is under the war department. Its members are officers, military officials, civil assistants, non-commissioned officers, and workmen. In 1875, it employed 1,258 persons, of whom 233 were army officers varying in rank from lieutenant to major-general.

In Italy, the surveys, prior to 1873, were carried on by officers of the staff corps under the chief of staff; but then the survey was given a more independent organization under the title of "Military Topographical Institute." Its present director is Major-General de Vecchi.

In Spain, the surveys are controlled by the Geographical Statistical Institute, with Major-General Ibañez at its head, and are largely carried on by officers of the army. In 1871 there were about thirty geodetic and topographical parties employed.

In Switzerland the Surveys are under the direction of Colonel Siegfried, chief of staff of the army.

In Sweden, the geodetic and topographic survey is carried on by the officers of the general staff of the army. Its head is the chief of the topographical division, at present Colonel von Vegesack.

* Report of the Chief of Engineers U. S. Army for 1876, p. 127.

In Russia, the military topographical corps is charged with surveys. Its organization is: 6 generals; 33 majors, lieutenant-colonels, and colonels; 150 cornets, lieutenants, and captains; 170 classed topographers; 236 topographers, of sergeant's rank; 42 apprentices.

The main divisions of the work of a European state survey are usually three, the triangulation, the topography, and the chartography. When it is practicable, the triangulation precedes the topography, and includes the primary, secondary, and tertiary triangulations and their computations.

If the triangulation points thus determined are numerous, as in the Prussian surveys, additional triangulation by the topographer will not be needed; when, as in Austria, comparatively few points are determined, the topographer will have to base on them a smaller triangulation for his detailed work.

The topographers having been furnished with the positions of certain points within the area to be covered by one of their topographical sheets, make a survey of that area, whose amount of detail will depend on the scale or object of the survey. Their work includes the determination of the required level-curves.

The topographers' sheets go to the chartographic division, whence they are either reproduced on the same scale or reduced to a smaller scale, and the maps resulting from them are published.

METHODS.

It is only within the present century that the methods of geodetic and topographic surveying for large areas have reached high precision. Previously the chief spur to the production of accurate maps was their necessity for military purposes. In some states progress beyond this need has scarcely been made as yet, and the maps give no more detail than is needed for the movement of troops; in others, and notably in Great Britain and Germany, the progress in civilization, the needs of the government, and the dense population, have required and have obtained the adoption of systems of topographical survey and publication, which are sufficient for all rational demands.

Aside from the military uses of maps, uses that in Europe must long be among the most important, the increasing intelligence of man in civilized countries demands an accurate knowledge of the earth's surface in his vicinity; a surface that, while slightly modified by his action upon it, yet retains the same principal features from age to age, so that one good survey, with slight occasional corrections, will suffice for an indefinite period.

Where the survey is on a large scale it serves another purpose, by giving, with sufficient accuracy for the imposition of taxes, the areas of all estates, and may, indeed, be made a basis for land titles. This, however, requires a larger scale than is necessary for ordinary purposes. In England, such maps, called parish plans, are on a scale of $\frac{1}{2500}$. In many European states, cadastral surveys have been made frequently without connection with a topographical survey, their object being the proper apportionment of land-taxes.

Again, when an accurate survey of a country is made, it will aid in the preliminary examinations for works of engineering, such as railroads, canals, river improvements, although no general survey could properly give the detail necessary for the final location or construction of such works.

In nearly all the European states the area over which the survey extends is covered by a net or chains of triangles of large size, the lengths of whose sides vary from 10 to 100 miles, and depend on bases measured with the highest precision that it is practicable to reach; their probable errors not exceeding about $\frac{1}{30000}$ part of their lengths. In some states all the angles of this net are observed with extreme precision, so that the probable error of any angle shall not exceed a few tenths of a second; in others, as in Italy and Spain, certain chains of triangles, 100 or 200 miles apart, running north and south and east and west, thus forming large quadrilaterals, are observed with the greatest precision, the intermediate triangles receiving less care. At the vertices of several of the triangles accurate determinations of latitude and longitude are made, and the azimuth of a triangle side is determined. The heights of the ground above the level of the sea at all vertices are found either by levelings of precision, or trigonometrically. The positions of these vertices are thus accurately known in latitude, longitude, and elevation; they are the precise reference points on which all the inferior points depend.

Starting from the triangle sides of the primary triangulation, the interior of each such triangle is cut up into a smaller triangulation, called secondary, and the secondary triangles, if necessary, into still smaller ones, called tertiary. The vertices of the tertiary triangulation are the guiding points of the topographer; on them he bases his sheets.

Thus, in Austria two or three such points at least are required for every sheet covering $7\frac{1}{2}$ minutes of latitude and 15 of longitude, on a scale of $\frac{1}{25000}$, with one or two

additional ones on the sheet, but perhaps outside of the border. This gives one point for each 60 square kilometer (24 square miles.)

In the Prussian surveys 10 trigonometrical points are required for each 56 square kilometers (22 square miles), scale of detail sheets $\frac{1}{25000}$.

In Italy the scale used being $\frac{1}{50000}$, one trigonometrical point is determined for every 25 square kilometers (10 square miles).

The heights of these points are also determined and given to the topographer, who bases on them his level or contour curves.

The determination of points on which the topographical survey depends has now been explained. If possible, those determinations should be made in advance of the topographical work. Where that is impossible the topographer must leave permanent marks in prominent positions, which are afterward determined from the triangulation.

On the Continent the topographical work is done mainly with the plane table, the amount of detail introduced depending on the scale adopted. Thus, in Prussia, where the scale of the plane-table sheets is $\frac{1}{25000}$, all necessary detail can be given. Roads, paths, mills, detached houses, important fences, streams, ponds, forests, bridges, mines—all can be shown. When the scale is diminished to $\frac{1}{50000}$, as in Italy, a part of this detail must be omitted, and still more when the scale of publication is diminished, as in Sweden, to $\frac{1}{100000}$.

In all the best modern surveys, even when hachures are used to give pictorial effect, the relief of the earth's surface is shown by level or contour lines, at elevations differing with the precision of the survey.

In the Prussian sheets, scale $\frac{1}{25000}$, the level curves are 20 or 25 feet apart in elevation. The Swiss sheets, scale $\frac{1}{25000}$, give them 10 meters apart. In the Austrian surveys at least eight heights are determined in each square kilometer for the scale $\frac{1}{25000}$, and seventeen for the double scale. The level curves are drawn at either 20 or 100 meters apart.

In the publication of the results of surveys, the scale $\frac{1}{25000}$, adopted by Prussia throughout, and by Switzerland, except for the most mountainous area, appears sufficient for all ordinary purposes. It permits the measurement of distances to within 15 feet. It gives much more detail than the scale of $\frac{1}{50000}$, at first adopted for the British maps; and their map now being published on a scale of 6 inches to the mile, or $\frac{1}{10560}$, while not large enough to give well the boundaries of estates, yet requires six times as many sheets as the scale $\frac{1}{25000}$ would do.

The scale $\frac{1}{25000}$ furnishes also an admirable basis for detailed geological work, enabling the geologist at once to place on maps of sufficient detail the results of his labors, as is being done in Prussia. Indeed, the general topographical and geological maps of that country now in progress present to us a standard of excellence which can only be attained after many years.

The detailed sheets need combination for general use into maps of a smaller scale. General Dufour adopted $\frac{1}{100000}$ for his excellent map of Switzerland, and the same scale is adopted for the general staff map of Prussia, derived from the $\frac{1}{25000}$ sheets.

In reference to the cost of these surveys per square mile, save in the case of Prussia, there is little information. In that country there are about 200 square Prussian miles (4,380 square miles) covered annually by triangulation, costing \$78,000 gold. The topography covers the same area per annum, and, with cartography, costs \$117,000 gold, per annum. Dividing the total expense, \$195,000 gold, by 4,380, we have \$44 gold, per square mile as the cost of the survey, exclusive of topography done by contract at the rate of 700 or 800 francs per square stunde, or \$16 to \$18 gold, per square English mile. The cost of triangulation, revision, and publication would have to be added to this. Half the cost of the new Swiss survey is borne by the Confederation and half by the cantons.

Publication on the scale of the field-sheets only takes place when some society or person agrees to bear half the expense. Austria expends annually about \$490,000 for her surveys, but the area covered is not known. It is stated that in the Austrian surveys an officer experienced in topography can, with the aid of two or more soldiers, survey in the six summer months, on a $\frac{1}{25000}$ scale, from 350 to 500 square kilometers (140 to 190 square miles), drawing the same in colors during the winter.

Schiavoni, in *Principii di Geodesia*, states that a topographer in six months can complete 81 square kilometers, the scale being $\frac{1}{25000}$. The wide difference in these estimates is doubtless due in part to difference in precision of the work, although the scales are nearly the same.

A writer in the *North American Review* of July, 1875, estimates the total cost of the ordnance survey of Great Britain up to that date at about \$20,000,000, in gold, and the area at 111,000 square miles. This would give a cost of \$190 per square mile, the work not yet being complete. It should be remembered that it includes many publications on scales larger than $\frac{1}{25000}$.

Taking the Prussian survey as a model, and recollecting that the cost, \$44 per square mile, previously stated, does not include the pay of officers, nor (probably)

the cost of the Geodetic Institute, which has charge of the primary triangulation and astronomical work, these two omissions, perhaps, increasing the cost of the work to \$60 or \$65, it is very doubtful if similar work in this country, on account of the greater cost of labor, both skilled and unskilled, could be done for less than \$100 gold per square mile.

If a lower standard of accuracy were adopted, such as determination of but one triangulation-point in 25 or 50 square miles, level curves 100 feet apart, field-sheets on a scale of $\frac{1}{250,000}$, and published maps on a scale of $\frac{1}{1,000,000}$, the cost might perhaps be reduced to \$50, gold, per square mile. For level, thickly settled areas, with numerous telegraph lines, the cost of the first and less precise maps might be further reduced by substituting astronomical for trigonometrical determinations of the guiding points. But when at last good topographical work was to be done, trigonometrical points would still be necessary.

To supply the information necessary for the location of an intercontinental line by any of these methods would take a great length of time. It must be done more quickly and for the definite purpose of railway location.

In several of the South American countries the government engineers, or engineers employed especially for the purpose, have surveyed lines between all the important points in the State, which are to be used if railways are ever built.

Even this method does not supply sufficient information, for there must be unity of action between the engineers of the several States, or else engineering parties must be sent out for the especial purpose of making the surveys for international and intercontinental lines.

It could not be considered extraordinary for any one country to undertake this survey, although an agreement between the interested nations with a sharing of the expenses would no doubt be a better plan.

The United States has always encouraged expeditions and explorations, whose object was either to increase scientific knowledge or to promote its trade with other countries. It has fitted out many to make surveys and explorations in other countries and for other scientific purposes. The following are a few of the more noteworthy instances:

In 1834 Charles Biddle was sent to Central America as a special agent to investigate plans, estimates, etc., for an interoceanic canal.

Act of Congress May 14, 1836, authorized the President to send out a surveying and exploring expedition to the Pacific Ocean and the South Seas, and appropriated \$150,000 for expenses. This expedition was commanded by Commodore Wilkes.

President Pierce, in 1853, authorized the Secretary of the Navy to send Lieut. Isaac Strain to make surveys of a canal route by way of Nicaragua. Expenses were paid by the Navy Department.

In 1853 Lieutenants Gibbon and Herndon, U. S. Navy, made exploration of the Amazon River to its sources.

In 1853-'54-'55-'56 Commander Thomas G. Page, U. S. Navy, made explorations of the La Plata River.

Act of Congress March 3, 1857, appropriated \$25,000 and authorized the Secretaries of War and Navy to employ such officers of the Army and Navy as might be necessary to make explorations for a ship-canal by way of the Atrato and Turando Rivers. The survey was made by Lieut. N. Michler, of the Army, and Lieut. T. A. Craven, of the Navy.

In 1860 Congress appointed a committee of Army and Navy officers to examine the Chiriqui route for a canal.

Act of Congress April 17, 1866, directed a survey, under the Secretary of the Navy, of Behring Straits and the China Seas, for the benefit of American shipping.

Act of Congress July 28, 1866, appropriated \$40,000 for a survey of the Isthmus of Darien, under the War Department.

Act of Congress July 12, 1870, directed the President to send an expedition toward the North Pole for scientific objects, under instructions from the National Academy of Sciences, and appropriated \$50,000 for the expenses.

Act of Congress July 15, 1870, appropriated \$30,000 for an examination and survey,

under the direction of the president of the Tehautepec and Nicaragua routes, to ascertain the practicability of canals.

Act of Congress, May 18, 1872, appropriated \$20,000 for the completion of the surveys of the Tehautepec and Nicaragua routes, and \$5,000 to complete the survey of the Darien route. Under the acts of 1870 and 1872 a number of surveys were made by the Navy Department.

A commission composed of General Humphreys, Mr. C. P. Patterson, of the Coast Survey, and Commodore Ammen, of the Navy, was appointed March 13, 1872, to report upon the results of these surveys.

Acts of Congress, March 13, 1849, March 3, 1853, May 31, 1854, August 4, 1854, appropriated in all \$444,200 for surveys by army engineers for the Pacific railroads in the United States.

Acts of Congress appropriated money for Arctic explorations made under De Haven, De Long, Franklin, and Greely.

An Antarctic expedition was sent out either by the Navy Department or under a special appropriation.

RAILWAY GAUGES.

The selection of a gauge for the Intercontinental line is not so unimportant a matter as it would seem.

In the United States there is but one great narrow-gauge system, the Denver and Rio Grande Railway, and it is rumored that this may be converted to standard gauge. A large loan has recently been obtained by the Mexican National Railway for the purpose of changing it to standard gauge. In Mexico the greater portion of the mileage is 4 feet 8½ inches; in Central America it is 3 feet, or slightly greater; in South America most of the Argentine railways have a gauge of 5 feet 6 inches; those of Brazil 1 meter, or 3 feet 3⅜ inches; in Chili it varies from 2 feet 6 inches to 5 feet 6 inches; in Colombia most of the roads are 3 feet; and in Peru 4 feet 8½ inches.

From a comprehensive review of the history and development of the railway gauges of the world the following particulars in regard to the gauges of the world are extracted. It was agreed in England about 1848 that a uniform gauge 4 feet 8½ inches should be used on all roads, except those already served by 7-foot gauge. The first German road, from Nuremberg to Furth, was built with 4 feet 8½ inches gauge, which is now used by all the principal roads of Germany, although there is a very considerable mileage of narrower gauges, mainly 1 meter, or 3 feet 3⅜ inches. France started her roads with a width between rail centers of 4 feet 11 inches, which has led to some slight variations of gauges according to rail width. The later roads have been built with a gauge of 4 feet 8½ inches. Holland began with a 6 foot 4 inch gauge, but has now altered all its roads to 4 feet 8½ inches. The railroad congress at Berne, in May, 1886, adopted the following resolution, which is to apply to Germany, Austria-Hungary, France, Italy, and Switzerland: "The gauge of railroads measured between the inner edges of the rail heads shall, for roads built or altered as to gauge after this resolution takes effect, not be less than 4 feet 8⅝ inches on straight lines, nor more than 4 feet 9⅝ inches on curves."

In Russia the first road opened, in 1832, from St. Petersburg to Zarskoe-Selo, about 16 miles, had a 6-foot gauge. When the second road was made, in 1842, from St. Petersburg to Moscow, the Czar, at the instance of our countryman, Major Whistler, fixed the Russian gauge at 5 feet, which increase over the English gauge was thought desirable for locomotive purposes. Major Whistler thought as wide a gauge uncalled for. The 5-foot gauge has continued the standard in Russia; but that it is not made different from the German gauge for military reasons seems to be proved by the fact, instanced by Herr Claus, that the lines built under imperial direction from Warsaw to Vienna and from Warsaw to Bromberg—the Berlin line—were carried out with the German gauge.

Ireland has a standard gauge of 5 feet 3 inches; Spain and Portugal, 5 feet 6½ inches. Sweden and Norway have the 4-foot 8½-inch gauge over the majority of their railroads; but 20 per cent. of the Swedish roads have gauges varying from 2 feet 7½ inches up to 4 feet. Norway has 592 kilos of standard gauge, and 970 kilos of 3 feet 6 inch gauge.

In Asia, of the British-Indian roads, with a collective length of 12,366 miles, about 7,450 miles have a gauge of 5 feet 5½ inches, the remainder being divided among 6 gauges from 2 to 4 feet. Of the narrow gauges, the most prevalent, embracing 4,200 miles, is the meter, 3 feet 3⅜ inches. The Ceylon railways have the standard Indian gauge. The Russian Trans-Caspian lines have the Russian standard gauge of 5 feet. In Asia Minor, the line Mudania Brussa has a gauge of 3 feet 7½ inches. The island of Java has 449 miles of 3 foot 6 inch gauge, and 126 miles with 4-foot 8½-inch.

In Japan, with the exception of an 8-mile piece, begun in 1885, with a gauge of 2 feet 9 inches, all the roads have a 3-foot 6-inch gauge.

In Africa, the Egyptian railroads, amounting to 932 miles, are of the 4 feet 8½ inch gauge. Algiers and Tunis, with 1,203 miles in 1884, had the 4 foot 8½-inch standard

on all except 155 miles, which had a 3-foot 7 $\frac{1}{4}$ -inch gauge. The English Cape Colony had in 1885 1,522 miles, all of 3-foot 6-inch gauge.

In America, apart from the comparatively small mileage of the United States roads with 3-foot gauge, practically the whole of the United States and Canadian railways are of 4 feet 8 $\frac{1}{2}$ inches to 4 feet 9 inches. In Mexico, in 1884, 2,083 miles were 4 feet 8 $\frac{1}{2}$ inches, and 944 3-foot gauge. In Brazil, at the end of 1884, there were 869 miles of 5 feet 3 inches gauge, and 4,164 miles of various gauges between 2 feet and 4 feet 7 inches over 3,700 miles, being 1 meter, or 3 feet 3 $\frac{3}{8}$ inches. So that this may be considered the standard gauge of Brazil.

In Australia the different colonies, rather singularly, have different gauges, that of New South Wales being 4 feet 8 $\frac{1}{2}$ inches; Victoria, 5 feet 3 inches; South Australia, 5 feet 3 inches and 3 feet 6 inches, and the other colonies 3 feet 6 inches.

The total mileage in operation in the world at the end of 1885 was 303,948 miles. Of this length 74 per cent. were of the 4 feet 8 $\frac{1}{2}$ inches to 4 feet 9 inches; 12 per cent. had larger gauges, and 14 per cent. smaller. (Engineering News, December 8, 1888.)

METAL RAILWAY TIES.

A point of great importance is the material of the ties, which should possess hardness, stiffness, and durability. In Central and South America the climate causes wood to deteriorate very rapidly, and again in certain parts of these countries it will probably be difficult to get suitable wood. One writer states that in Guatemala ants ate the wooden ties very rapidly. The usefulness of metal ties is appreciated already by the railway builders in Mexico and South America, as the following article from the Engineering News will show :

METAL RAILWAY TIES.

The following is the substance of a preliminary report made to the Department of Agriculture in February, 1889, by Mr. E. E. Russell Tratman, giving the present extent of use of iron ties throughout the world. It gives in concise form very complete information on this subject.

SOUTH AMERICA.

Argentine Republic.—In this State, cast-iron pot ties are used almost exclusively, except in the far west and north. The Buenos Ayres Great Southern Railway, which began operations in 1865, has $13\frac{1}{2}$ miles of double track and $819\frac{1}{2}$ miles of single track laid with cast-iron ties of an improved design. They are adopted on account of the difficulty of procuring good hard-wood ties in sufficient quantity and the greater expense of these wooden ties, also because they give a more rigid and satisfactory track. The Central Argentine Railway has 246 miles laid with cast-iron track. The Santa Fé and Cordoba Railway ordered 20,000 steel ties in England in 1888.

Chili.—Steel ties have been tried to a small extent, but the type was considered too heavy and expensive. Previous to the award in November last, to an American syndicate, of the contract for building about 780 miles of railway for the State, proposals had been invited by the Chilean legation in France for the supply of 739,400 metal ties 9 feet long and 725,100 ties $4\frac{1}{2}$ feet long.

United States of Colombia.—There has been some talk of adopting metal ties on the Bolivar Railway.

MEXICO.

The Mexican Railway (Vera Cruz line) is using a large number of steel ties of the type in general use in India, and has obtained very good results with them, especially at times when the road has been flooded. These ties were first used in 1884, and at the end of June, 1888, there were $46\frac{1}{2}$ miles of track laid with steel ties. The Mexican Central Railway has been contemplating the adoption of the same type of tie on the mountain division of the road, the advantages being that they last longer than wooden ties and keep the track in perfect gauge.

As a fact of interest I have extracted from a table in Engineering News the following :

On the Pennsylvania Railroad, in 1887, the average tons in loads of freight trains was 207; the average charge for transporting 1 ton 1 mile was .67 of a cent; the percentage of operating expenses to earnings was 63; the percentage of traffic expenses (coaching and merchandise) to total operating expenses was 35; the average cost of transporting 1 ton 1 mile was .426 of a cent; the average cost of transporting 1 ton 1 mile, deducting all "traffic expenses" (coaching and merchandise) on all roads, .277 of a cent; average cost of train mile, freight and passenger, was 85.37 cents.

Table showing the Railways of Mexico, Central and South America, with their length, gauges, etc.

ARGENTINE REPUBLIC.

Name of railway.	From—	To—	Length. <i>Miles.</i>	Projected to—	Length. <i>Miles.</i>	Gauge.
Andine Railway.....	Villa Maria.....	San Juan.....	430	Chilian boundary.....	121	5 feet 6 inches.
Buenos Ayres and Valparaiso Transandine Railway Company.....	Mendoza.....				Do.	Do.
Argentine Northeastern.....	Monte Caseros.....		89	Corrientes.....	140	
Bahia Blanca and Northwestern.....	Bahia Blanca.....			Posatos.....	233.7	
Buenos Ayres and Ensenada Port.....	Buenos Ayres.....	Ensenada.....	35	Villa Mercedes.....	738	
Buenos Ayres Northern.....	Buenos Ayres.....	San Fernando.....	20			Do.
Buenos Ayres Great Southern.....	do.....	Bahia Blanca.....	445.25			
Branches, second track, etc.....	do.....		332.75		511	Do.
Under construction.....						
Buenos Ayres and Pacific.....	Mercedes.....	Villa Mercedes.....	371.4			Do.
Branches.....	do.....	Buenos Ayres.....	34.6		385	Do.
Buenos Ayres and Rosario.....	Buenos Ayres.....	Sunchales.....	341	Tucuman.....	110	Do.
Central Argentine.....	Rosario.....	Cordoba.....	246.6		167.5	
Branches under construction.....	Cordoba.....			Crus del Eje.....	100	
Cordoba and Northwestern.....	do.....			Western and Central Colonies Railway.....	132	4 feet 8½ inches.
Cordoba Central.....						
East Argentine.....	Concordia.....	Monte Caseros.....	96			
Entre Rios Central.....	Monte Caseros.....	Celbo Creek.....	3			Do.
First Entre-Riano.....	Parana.....	Uruguay.....	186		180	
Mendoza and San Rafael.....	Guañaguachu.....	Puerto Bcheque.....	6.2	San Rafael.....	400	1 meter.
National Central Northern.....	Mendoza.....			Bolivian frontier.....		
Branches.....	Cordoba.....	Tucuman.....	338.5	(Extension).....	100.75	
Northern Colonies Railway of Santa Fé.....	Frias.....	S. del Estero.....	100.4			
Branches.....	Recoar.....	Chunbricha.....	109.1			
Northwest Argentine.....	Santa Fé.....	Lebman.....	62			
San Cristobal and Tucuman.....	San Carlos.....	Santa Fé.....				
Santa Fé and Cordoba Great Southern.....	Santa Fé.....	Colastine.....				
Villa Maria and Rufino.....	La Madrid.....	Santa Ana.....	30	Tucuman.....		
Western and Central Colonies of Santa Fé.....	Villa Constitución.....		10	Venado Tuerto.....	103	
Lines in progress.....	do.....			La Carlota.....	84	
	Villa Maria.....			Rufino.....	140.5	
					337.9	

5 feet 5 inches.

Western Railway of Buenos Ayres.....	{	Buenos Ayres.....	9 de Julio.....	162.4	.....	.....	.....
Several branches		Lujan.....	Junin.....	155.6	.....	.....	.....
Projected.....				256.7	.....	.....	.....
Western Railway of Santa Fé.....	{	Rosario.....	Candelaria.....	40	.....	San José de la Esquina	102.96
		Candelaria.....			.....	Melinene	70
					.....		80
Total.....				4,032.5	.....		.....

BOLIVIA.

Antofagasta and Bolivian Railway Company.....	{	Asociación.....	Uyuni.....	106.2	.....	Oruro.....	193.5
Arica and Tacna.....		Tacna (Chili).....			.....	Potosí.....	.....
		Desaguadero.....			.....	La Paz.....	.....
Arequipo and Puno (Peru).....	{	Oruro.....			.....	.....do.....	92
		Frontier.....			.....	Oruro.....	135
		Rio Paraguay.....			.....	Cochabamba.....	124
		Santa Cruz.....			.....	Uyuni.....	300
Central Northern (Argentine).....	{	Parana.....			.....	Santa Cruz.....	465
		Santa Cruz.....			.....	Sucre.....	465
		Cochabamba.....			.....	Tarija.....	186
		La Paz.....			.....	Rio Grande.....	93
					.....	Rio Chimore.....	155
					.....	Rio Beni.....	310
Total.....				106.2	.....		.....

BRAZIL.

Alagoas.....		Maceio.....	Imperatriz.....	5.5	.....	Assemblies.....	40
Branch.....		Mainline.....	Aymores.....	88	.....	Philadelphia.....	155.6
Bahia and Minas.....		Carvelas.....	Alagoinhas.....	76.2	.....		.....
Bahia and San Francisco.....		Bahia.....	Timbo.....	51.5	.....		.....
Timbo branch.....		Alagoinhas.....	Villa Nova.....	199.6	.....	Joaazeiro.....	81.2
Bahia and San Francisco extension.....		.....do.....	Rainha.....		.....		.....
			Itague.....	110	.....		.....
Brazilian Great Southern.....		Quareim River.....	Quaimadinhãs.....	170.4	.....		.....
Central Bahia.....		Sao Felix.....	Ferra de S. Anna.....	15	.....	Santo dos Tombos.....	1.9
Branch.....		Cachoeira.....	Porto Alegre.....	81	.....		72.1
Campes and Carangola.....		Campes.....		24.2	.....		.....
Patrocínio branch.....				13	.....		.....
Itabapoana branch.....		Campo Lempa.....	Braganza.....	32.2	.....		.....
Companhia Bragançã.....		Campes.....	Imbetiba.....	59.5	.....		.....
Companhia Estrada de Ferro Macaé e Campos.....		Paratyba.....	Independência.....	60	.....	Cabedello.....	11.2
Conde d'En.....		Cobé Junction.....	Pilar.....	15	.....	Inga.....	.....
Branch.....					.....	Alagoa Grande.....	.....
Do.....		Malungu.....			.....		.....

1 meter.

Do.
5 feet, 3 inches.
Do.
1 meter.3 feet, 6 inches.
Do.
1 meter.

Do.

Do.

Do.

Do.

Table showing the Railways of Mexico, Central and South America, with their length, gauges, etc.—Continued.

BRAZIL—Continued.

Name of railway.	From—	To—	Length.	Projected to—	Length.	Gauge.
Corcovada.	Laranjeiras.	Mount Corcovada.	<i>Miles.</i> 2.5		<i>Miles.</i>	5 feet 3 inches.
Dom Pedro Segundo.	Rio de Janeiro.	Surrounding Provinces.	440.0			
Extensions under construction						
Donna Theresa Christina	Imbetuba.	Imbetuba.	71.9		94.2	1 meter
Estrada de Ferro Baturite.	Laguna.	Canao.	68.6			Do.
Including branches.	Fortaleza.					1.1 meter.
Estrada de Ferro de Cantagallo.	Niteroy.	Rio Macuco.				Do.
Total with branches.	Recife.	Passageme.	165			3 feet 3½ inches.
Great Western of Brazil.	Nazareth.	Linoeiro.	60		28.5	Do.
Imperial Brazilian Natal and Nova Cruz Railway		Timbauba.				Do.
Ituana.	Natal.	Nova Cruz.	75	San Manoel	62.9	1 meter.
Branch.	Jundiahy.	Practicaba.	122.4			Do.
Imperial Brazilian Natal and Nova Cruz Railway	Porto Nova de Cunha	Int.	14			Do.
Leopoldina.		Northwest.	184.1			Do.
Total with branches.						
Extensions and branches projected						
Madera and Mamoré	Pitangui.	Tres Coracoes.	105.4	Around Falls.	40.3	204.6
Minas Central of Brazil.	Cruzeiro.			Don Pedro II railroad	150	Do.
Minas and Rio.	Campinas.	Casa Branca.	173			Do.
Mocimiana.			168.6			Do.
Branches.						
Under construction						
Para and Braganca.	Belem.	Apehu.	36.6	Braganca.	116.5	Narrow.
Paraguana and Guratiba.	Paraguana.	Morretes.	68.8		93	1 meter.
Paulista.	Jundiahy.	Belon do Descalvados.	125			5 feet 3 inches.
Branch.						
Paula Alfonso.	Condeiras.	Pinal.	26			Do.
Porto Alegre and New Hamburgo	Phanhu.	Jacoba.	71.9			1 meter.
Recife and Carnaru	Porto Alegre.	New Hamburgo.	26.7			Do.
Recife and Sao Francisco Pernambuco	Recife.	Caruaru.	47.1		21.7	Do.
Recife and Sao Francisco Pernambuco.	do	Palmates.	77.5			5 feet 3 inches.
Rio de Janeiro and Northern	Una.	Garanhuns.	80.5		310	1 meter.
Rio de Janeiro.	Manna.	Petropolis.	57	Entre Rios.		Do.
Branches.	Quinta do Caju.	Rio de Ouro.	30			Do.
Sao Paulo Brazilian.	Santos.	Jundiahy.	10.4			5 feet 3 inches.
Sao Paulo and Rio Janeiro	Sao Paulo.	Cachoeira.	85.2			1 meter.
Santo Amoro	Santo Amoro.	Jacu.	143.8			Do.
			22.3			

	Lucca	Miraema	57.6	2 feet 11½ inches.
Santo Antonio de Padua	Camocim	Sobral	163.7	
San Carlos de Pinal	San Paulo	Tiete	80.0	
Sobral	Rio Grande	Bagé	137.6	
Sorocabana	Taquary and Uruguayana	Santa Maria	173.6	1 meter.
Estrada de Ferro do Rio Grande & Bagé	União Valenciano	Rio Preto	162.4	Do.
Taquary and Uruguayana	Desengano		39.0	1.1 meter.
União Valenciano	Inapemirim Alegre		43.4	
Inapemirim Alegre	São Izabel do Rio Preto		45.9	
São Izabel do Rio Preto	San Fedelis (under construction)			
Oeste de Minas	Joiz de Fora and Pion		125.2	1 meter.
Joiz de Fora and Pion	Banulause.		32.2	
Banulause.	Campos and St. Sebastian		7.4	
Campos and St. Sebastian	Rio das Flores		11.1	
Rio das Flores	Barão Araruama		22.3	
Barão Araruama	Rezende and Areias		24.8	
Rezende and Areias	Rio Pardo (Minas Geraes)		17.4	
Rio Pardo (Minas Geraes)	Victoria Natividade		22.3	
Victoria Natividade	Araraquara Rio Grande			
Araraquara Rio Grande	Other lines		174.6	
Other lines	Total		4,961.4	

CHILL.

					1. 67 meters.
Lines owned by the State.	Santiago.....	Valparaiso.....	115.9		
	do.....	Curico.....	114.7		
	Curico.....	Chillan.....	130.8		
	Chillan.....	Talcahuano.....	116.2		
	Andes Branch.....		27.9		
	Palmilla Branch.....		24.2		
	San Rosendo.....		45.3		
	Angol.....	Traiguen.....	44.6		
	Santa Fé.....	Los Angeles.....	13.6		
	Renaca.....	Fort Victoria.....	46.5		
	Robleria.....	Collipulli.....	26.0		
	Chanaral.....	Salado.....	37.2		
	Tocopilla.....			Nitrate Grounds.....	60.0
	Antofagasta.....	Acoetan.....	272.8		
	Arica.....	Tacna.....	39.0		
Lines owned by individuals or companies:	Antofagasta Nitrate and Railway Company.....			Chonchi.....	135.0
	Arica and Tacna.....			Agua Blanca.....	2 feet 6 inches.
	Antofagasta Nitrate and Railway Company.....				1 meter.
	Antofagasta and Agua Blanca.....				4 feet 2 inches.
	Antofagasta and Cerro Blanco.....				4 feet 3½ inches.
	Carrizal and Cerro Blanco.....				
	Total with branches.....				
	Copapo.....				

Table showing the Railways of Mexico, Central and South America, with their length, gauges, etc.—Continued.
CHILI—Continued.

Name of railway.	From—	To—	Length.	Projected to—	Length.	Gauge.
Coquimbo.	Coquimbo	La Serena.	<i>Miles.</i> 9.3	.....	.....	5 feet 6 inches.
Elqui	do	Ovalle and branch.	75.3	.....	.....	1 meter.
Laraquete and Moquegua.	Seren.	Elqui	48.4	.....	.....
Mejillones and Cerro Gordo.	.....	Moquegua.	24.8	.....	.....
Patillos.	.....	Cerro Gordo.	18.0	.....	.....	2 feet 6 inches.
Pisagua.	.....	Salubreras	57.7	.....	.....	Do.
Branches and sidings	.....	Tres Marias	54.8	.....	.....	Do.
Iquique.	Iquique.	Tres Marias	10.9	.....	.....
Branches, etc	Taltal.	El Refresco	67.7	.....	.....
Sidings	Taltal.	.....	52.6	.....	.....
Tongoy	Tongoy	Tamaya	47.8	.....	.....
	Huasco	.....	3.0	.....	.....
	Ovalle	.....	34.1	.....	.....	3 feet 6 inches.
	Villas	.....	.....	.....	.....	1 meter.
	Santiago.	.....	.....	.....	.....
	Palmilla	.....	.....	.....	.....
	Talca	.....	.....	.....	.....
	Pelequen	.....	.....	.....	.....
	Cobhue	.....	.....	.....	.....
	Victoria	.....	.....	.....	.....
	La Calera	.....	.....	.....	.....
Total of all			1,759.9	.....	610.2	
COLOMBIA.						
Panama Railway	Colon	Panama	47	.....	.....	5 feet.
Bolivar	Baranquilla	Pto Belillo.	20	.....	.....	3 feet 6 inches.
Cucuta	Cucuta	Vilhimazar	34	.....	.....	3 feet 3½ inches.
La Dorado	Hondo	Yeguas	18	.....	.....	3 feet.
Girardot	Girardot	Tocaima	20	.....	.....	78
Antioquia	Puerto Berrio.	Pavis	30	.....	.....	Do.
Cauca	Buenaventura	Cienega	12	.....	.....	Do.
Santa Marta	Santa Marta	.....	20	.....	.....	Do.
Santander	Puerto Wilchío	Bucaramanga	1	.....	.....
Savanna	Facatativa	Bogota.	24	.....	.....
Total			226	.....	.....

COSTA RICA.

Atlantic Railway	{ Punta Limon	Carrillo	70.	Alajuela (or San José)	50.
	{ Punta Arenas	Esparta	14.	A junction with first section	74.5
	{ Alajuela	Cartago	26.5	San Juan River	90.
Central Railway	{ Jimenez			Nicaragua boundary	
	{ Esparta				
Total			110.5		

14

ECUADOR.

Yaguachi	Yaguachi	Chimbo	40.	Sibambe	49.
(Southern Railway)	{ Duran			Yaguachi	14.
	{ Sibambe			Quito	
Ibarra and San Lorenzo	{ Ibarra			San Lorenzo	
Bahia de Carequiz and Quito	{ Bahia			Quito	
("La Compania del Ferrocarril de Quito y el Pacifico.")					
Machala and Cuenca	Machala			Cuenca	
	{ Baba			Vinces	
	{ do			Pueblo Viejo	
Baba and Vinces					
Total			40.		

GUATEMALA.

Champerico and Northern Railroad	Champerico	Retalhulén	27.25	San Felipe	43.25
Ferro Carril del Norte de Guatemala	{ Santo Tomas		4.	Guatemala City	185.
Guatemala Central Railroad	{ San José	Guatemala City	71.8	La Antigua	
Branch	{ Guatemala City			Mexican boundary	
Total			103.05		

3 feet.
1 meter.

HONDURAS.

Honduras Central Railroad	Truxillo			Juticalpa and the Bay of Fonseca	200.
Honduras North Coast Railway and Improvement Company	{ do			Puerto Cortes and Guatemala boundary	150.
Honduras Railway (operated only to St. Iago, 37 miles)	Puerto Cortes	San Pedro Sula	69.	Bay of Fonseca	200.
Truxillo and Roman River Railroad	Truxillo			Roman River and up Arenal Valley	20.
Total			69.		

3 feet.

Table showing the Railways of Mexico, Central and South America, with their length, gauges, etc.—Continued.

MEXICO.

Name of railway.	From—	To—	Length.	Projected to—	Length.	Gauge.
Sonora	Nogales.....	Guaymas.....	<i>Miles.</i> 262.41	.....	<i>Miles.</i>	4 feet 8½ inches.
Mexican Central	El Paso.....	City of Mexico.....	1,224.0	.....	.....	Do.
Branches, etc.	Laredo.....	City of Mexico.....	444.0	.....	.....	3 feet.
Mexican National	Piedras Negras.....	Torreon.....	393.6	.....	.....	Do.
Branches, etc.	Laredo.....	Guatemala frontier.....	383.4	.....	.....	4 feet 8½ inches.
Mexican International	City of Mexico.....	Puebla.....	12.3	.....	.....	Do.
Branches, etc.	Vera Cruz.....	City of Mexico.....	264.0	.....	.....	.....
Mexican Southern	Apizaco.....	Jalapa.....	70.76	.....	.....	.....
Built.....	Vera Cruz.....	Puebla.....	28.	.....	.....	.....
Mexican Railway	Mexico City.....	Perote.....	339.9	.....	.....	3 feet.
Jalapa Branch.....	Altata.....	Culiacan.....	160.	.....	.....	Do.
Branch.....	Mazatlan.....	.....	38.5	.....	.....	.....
Interoceanic	Eagle Pass.....	.....	.....	.....	.....	.....
Total built and owned by this company.....	.....	.....	.....	.....	.....	.....
Part of main line.....	.....	.....	.....	.....	.....	.....
Sinaloa and Durango.....	.....	.....	.....	.....	.....	.....
Branches.....	.....	.....	.....	.....	.....	.....
Texas, Topolobampo and Pacific.....	.....	.....	.....	.....	.....	.....
Branches.....	.....	.....	.....	.....	.....	.....
Total length, about 1,500 miles.....	.....	.....	.....	.....	.....	.....
Tehuantepec	Minatitlan.....	Salina Cruz.....	78.6	.....	.....	4 feet 8½ inches.
Cardenas.....	Irolo.....	El Ingenio.....	4.0	.....	.....	.....
Ferro-carril de Hidalgo	Monterrey.....	Pachuca.....	37.	.....	.....	3 feet.
Branches.....	Tehuacan.....	.....	26.	.....	.....	.....
Ferro-carril de Monterey y Golfo	Maravatio.....	.....	78.2	.....	.....	.....
Ferro-carril Nacional de Tehuacan & Esperanza	Nautla.....	Esperanza.....	31.0	.....	.....	.....
Michoacan & Pacific.....	Puebla.....	Angango.....	27.9	.....	.....	.....
Ferro-carril de Matamoros	Vera Cruz.....	Izucar.....	4.0	.....	.....	.....
Ferro-carril de Vera Cruz, Anton Lizardo and Alvarado	Veracruz.....	Alvarado.....	37.0	.....	.....	.....
Yucatan Railways.....	.....	.....	34.0	.....	.....	Narrow.
Ferro-carril de Merida & Progreso	Merida.....	Progreso.....	24.0	.....	.....	.....
Soluta branch.....	do.....	Soluta.....	30.0	.....	.....	4 feet 9 inches.
Ferro-carril de Merida & Peto	do.....	Tiscal.....	43.4	.....	.....	3 feet.
Ferro-carril de Merida & Calkini	do.....	Chochola.....	21.0	.....	.....	Do.
Branches.....	Campeche.....	do.....	.....	.....	.....	Do.
Do.....	do.....	Pomuch.....	39.0	.....	.....	Do.
Do.....	do.....	Lerna.....	6.	.....	.....	Do.
Ferro-carril de Merida & Valladolid	Merida.....	Merul.....	22.	.....	.....	Do.
Branch.....	Conkal.....	Progreso.....	19.	.....	.....	Do.

Do.....	Cenotilla.....	Tizimin.....	34.7	Do.
Concessions.....	{Cancel.....	Progreso.....		
	{Izamal.....	Chan Santa Cruz.....		
	Tekanto.....	Izamal.....		
Total.....		5,021.66		

NICARAGUA.

Nicaragua Railway.....	Monotombo.....	58	3 feet 6 inches.
San Juan San Jorge.....	Granada.....	32	Do.
Chinandega.....	San Juan.....		
Matagalpa and Lake Managua.....	Chinandega.....		19
Matagalpa and East Coast.....	Matagalpa.....		90
Total.....	Matagalpa.....	90	

PARAGUAY.

Ferro-carri! Nacional.....	Asuncion.....	92.0	136	5 feet 6 inches.
Transcontinental Railway.....	Villa Rica.....		806	
Total.....	do.....	92.0		

PERU.

Payta and Piura.....	Piura.....	63.0	Limon.....	4 feet 8½ inches.
Pimentel.....	Chiclayo.....	30.0	Narrow.....	Narrow.
Eten and Ferriñafe.....	Ferriñafe.....	50.0		4 feet 8½ inches.
Pacasmayo and Magdalena.....	Yonan.....	93.0	Cajamarca.....	Do.
Salaverry and Trujillo.....	Trujillo.....	85.0	Coal mines.....	3 feet.
Chimbote and Requay.....	Requay.....	60.0	Huacho.....	Do.
Lima, Ancon and Chancay.....	Chancay.....	43.0		1 meter.
Lima and Magdalena.....	Magdalena.....	5.0		Do.
Callao, Lima and Oroya.....	Chila.....	86.5		4 feet 8½ inches.
Projected.....	Mill.....		Oroya.....	Do.
Cerro de Pasco.....	Mines.....	9.0	Cerro de Pasco.....	Do.
Lima Railway Company.....	Callao.....	17.5		Do.
Pisco and Ica.....	Pisco.....	46.0		Do.
Branch.....	Ica.....	1.0		Do.
Mollendo and Arequipa.....	Arequipa.....	107.0		Do.

Table showing the Railways of Mexico, Central and South America, with their length, gauges, etc.—Continued.

PERU—Continued.

Name of railway.	From—	To—	Length.	Projected to—	Length.	Gauge.
Arequipa, Puno and Cuzco.	Arequipa	Puno	<i>Miles.</i> 217.6		<i>Miles.</i>	4 feet 8½ inches.
Siding, etc	Yuliaca	Santa Rosa	82.0	Cuzco.		Narrow.
Proposed by Government.	Puno		41.5	Desaguadero.		Do.
	Oroya Railway			Point on Amazon.	180.0	
	Chancay			Cerro de Pasco.		
	Tarma			Puno		
	Trujillo			Cajamarca		
Total	..do			Eten.		
			1,037.1			

SALVADOR.

Acajutla and Sonsonate Railroad	Acajutla	Sonsonate	21½	Amate Marin	80½	3 feet.
San Salvador and Amate Marin	San Salvador			do	25	
La Union and San Miguel	La Union			San Miguel		
La Libertad and San Salvador	La Libertad			San Salvador		
Salvadora Central Railway	La Union			Guatemala		
Tramway	San Salvador	Sta Tecla	10½	Boundary line		
Total			32			

URUGUAY.

Central Uruguay	Montevideo	Rio Negro	170	Durazno		4 feet, 8½ inches.
Branch	Santa Lucia	San José	20	Hygueritas	126	
Central Uruguay, Northern Extension.	Montevideo	Minas	74	Brazilian frontier	179	Do.
Northeastern	Salto	Brazilian frontier.	111	Artigas		
Branch	Isla de Cabello.			San Eugenio	70	
Midland Uruguay	Paso de los Toros			Salto	174	
Northern Railway and Tramway	Montevideo	Santa Lucia	25			
Total			400			

VENEZUELA.

Caracas and La Guayra.....	Caracas.....	La Guayra.....	23	.....	.....	3 feet.
Marquetia and Macuto.....	Marquetia.....	Macuto.....	4.9	.....	.....	.....
Caracas and El Valle.....	Caracas.....	El Valle.....	3.1	.....	.....	3 feet, 6 inches.
Puerto Cabello and Valencia.....	Puerto Cabello.....	Valencia.....	33.5	.....	.....	2 feet.
Tucacas.....	Tucacas.....	Mines of Aroa.....	55.8	.....	.....	.....
La Ceiba and Mendoza.....	La Ceiba.....	Mendoza.....	21.7	.....	Valera.....	.....
Barcelona.....	Barcelona.....	Guanta Bay.....	11.8	.....	.....	.....
Carenero.....	Carenero.....	San José.....	20.5	.....	Valencia.....	132.4
Grand Trunk Line of Venezuela.....	Caracas.....	.....	12.4	.....	San Carlos.....	176.7
.....	La Luz.....	.....	9.3	.....	Barquisimeto, etc.....	217.0
.....	La Fria.....	.....	.....	.....	San Cristobal.....	.....
La Luz and Barquisimeto.....	Merida.....	.....	.....	.....	Lake Coast.....	161.2
.....	Maracalbo.....	.....	.....	.....	Cajaro.....	96.1
.....	Orinoco.....	.....	.....	.....	Yuruari.....	124.0
Total.....	.....	.....	196	.....	.....	.....

BRITISH GUIANA.

Demerara Railway.....	Georgetown.....	Mahaica.....	20	.....	.....
Total.....	.....	.....	20	.....	.....

CERTAIN HEIGHTS DETERMINED BY THE FRENCH EXPEDITION.

Locality.	Height.	Locality.	Height.
	<i>Feet.</i>		<i>Feet.</i>
Tactic	4,725	Copan	1,830
Coban	4,356	Vado Hondo	1,237
San Cristobal	4,643	Chiquimula	1,244
San Miguel Uspantan	6,040	Zacapa	449
Cunen	5,942	Pacaya	8,366
Sacapulas	3,826	Volcan de Agua	12,313
Santa Cruz del Guiche	6,621	Volcan de Agua (Santa Maria)	6,828
Quezaltenango	7,697	Volcan de Agua (Crater bottom)	12,087
Totonicapan	8,150	Volcan de Fuego	13,127
Sololá	7,041	Volcan de Fuego (la Meseta)	12,001
Guatemala City	5,013	Acatenango	13,616
Antigua	5,072	Volcan de Atitlan	11,723
Ciudad Vieja	5,151	Cerro de Atitlan	11,723
Escuintla	1,450	Cerro Quemado	10,201
Amatitlan	3,901	Santa Maria	11,453
Palin	3,753	Lago de Atitlan	5,112
Cuajiniquilapa	2,848	Lago de Amatitlan	3,918
Cerro Redondo	3,542	Lago de San Cristobal	4,643
Los Esclavos	2,394	Lago de Ayarza	3,100
Agua Blanca	2,658	Jalpatagua	1,904
Suchitan	4,108	Rio Paz	908
Santa Catarina (Rio)	2,251	Apaneca	4,864
Retalhuleu	775	Ahuachapan	907
Salama	2,874	Sonsonato	650
Col de Pinula	6,300	Santa Tecla	2,980
Tray Janes	5,537	San Salvador	2,201
Lac de los Pinos	3,274	Cojutepeque	2,940
Santa Caterina (Pueblo)	2,325	San Vicente	1,175
Esquipulas	2,986	Rio Lempa (Barca)	10
Paso del Rodeo	2,744	Chinameca	2,000
Los Horcones	3,637	San Miguel	363
Piedra de Amolas	2,340	La Union	66

HEIGHTS IN NICARAGUA.

Lake Nicaragua	110	Lake Managua	148
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HEIGHTS IN COSTA RICA.

San Jose	3,868	Atenas	2,380
Cartago	4,930	San Mateo	1,050
Heredia	3,786	Esparta	718
Alajuela	3,001		

HEIGHTS IN SOUTH AMERICA.

Medellin.....	5, 085	San Rafael.....	8, 764
Antioquia.....	1, 888	Huanuco.....	6, 300
Cartago.....	3, 197	Juliaca.....	13, 025
Buga.....	3, 281	Puno.....	12, 962
Cauca at Buga.....	2, 957	La Paz.....	12, 226
Popayan.....	5, 810	Potosi.....	13, 330
Purace.....	8, 732	Quaranda.....	8, 840
Tuquerres.....	9, 968	Arenal.....	14, 250
Bogota.....	8, 725	Ambato.....	8, 490
Piedras.....	775	Tacunga.....	9, 181
Tocaima.....	1, 806	Tinipullo.....	11, 662
Ibagné.....	4, 475	Panecilla.....	10, 101
Palmilla.....	6, 864	Riobamba.....	9, 200
Gallegos.....	8, 775	Tablon.....	10, 516
Balsa.....	4, 620	Papallacta.....	10, 511
Honda.....	719	Baeza.....	6, 625
Paramo of Quindio.....	11, 496	Archidona.....	2, 115
Neyva.....	2, 511	Napo.....	1, 450
La Plata.....	4, 227	Mouth of Napo.....	385
Cali.....	3, 537	Coca.....	850
Cauca at Cali.....	3, 278	Mouth Aguarico.....	586
Las Papas.....	14, 272	Moyobamba.....	1, 043
Point near Pasto.....	6, 488	Chachapoyas.....	7, 682
Ibarra.....	7, 500	Tinga Maria.....	2, 200
Quito.....	9, 520	Negro and Cassiquiari.....	400
Cuenca.....	8, 640	Mouth Mamore.....	800
Jaen.....	1, 491	Tabatinga.....	255
Loja.....	6, 768	Nauta.....	436
Cerro de Pasco.....	13, 673	Mouth Ucayali.....	376
Tarma.....	10, 075	Iquitos.....	350
Cuzco.....	11, 445	Cajamarca.....	9, 438

GREATEST HEIGHTS FOUND ON CANAL SURVEYS.

Tehautepec, 780 feet, by Barnard's map.

Nicaragua Canal, 156; summit is 46 feet above Lake Nicaragua.

From Baily's map of Nicaragua, on which there are laid down several lines for canals, the following heights are obtained: Sapoa trial line, 258 feet; Brito line, 202 feet, Managua Realejo line, 212 feet; Lake Managua to Gulf of Fonseca probably 55 feet above the lake.

Panama: Garella's line, 459.2 feet, via Rio Gigante, Rio Grande, Rio Chagres.

Panama Railroad: Colonel Hughes, in Admiral Davis's report, 299 feet.

Darien: Savari and Morti Rivers, by Gisborne, 1854, 1,020 feet.

Darien, via Atrato, Turando, Michler, 900 feet.

Honduras Interoceanic Railroad, in Squier's book of same name, via Rancho, Chiquita Pass, 2,408 feet; Guajoca, 2,308 feet; Tambla, 1,944 feet; Lamani, 2,016 feet; Nicaragua, Pim, and Leeman, via river Tule and Rama, highest, 700 feet. This is east of Nicaragua.

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	Miles.
New York to St. Louis.....	1,063
New York to New Orleans	1,338
St. Louis to El Paso.....	1,359
St. Louis to Eagle Pass	1,098
St. Louis to Laredo	1,196
St. Louis to New Orleans	700
New Orleans to El Paso	1,158
New Orleans to Eagle Pass.....	745
New Orleans to Laredo.....	731
New York, via St. Louis, to El Paso	2,424
New York, via St. Louis, to Eagle Pass.....	2,163
New York, via St. Louis, to Laredo	2,261
New York, via New Orleans, to El Paso	2,496
New York, via New Orleans, to Eagle Pass.....	2,083
New York, via New Orleans, to Laredo	2,069
San Francisco to El Paso, via Southern Pacific.....	1,286
El Paso to City of Mexico	1,224
Eagle Pass to City of Mexico.....	1,091
Laredo to City of Mexico.....	839
Eagle Pass to Torreon.....	384
New York, via St. Louis and El Paso, to City of Mexico	3,648
New York, via St. Louis and Eagle Pass, to City of Mexico.....	3,254
New York, via St. Louis and Laredo, to City of Mexico.....	3,100
New York, via New Orleans and El Paso, to City of Mexico	3,720
New York, via New Orleans and Eagle Pass, to City of Mexico.....	3,174
New York, via New Orleans and Laredo, to City of Mexico.....	2,908
San Francisco via El Paso to City of Mexico	2,510
Chicago to City of Mexico, via El Paso	2,866
Chicago to City of Mexico, via Eagle Pass.....	2,471
Chicago to City of Mexico, via Laredo.....	2,155
St. Louis to City of Mexico, via El Paso	2,584
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St. Louis to City of Mexico, via Laredo	1,823
Kansas City to City of Mexico, via El Paso	2,398
Kansas City to City of Mexico, via Eagle Pass.....	2,080
Kansas City to City of Mexico, via Laredo	1,714
Chicago to New Orleans	915
Corpus Christi to Laredo	161
Corpus Christi to City of Mexico	1,000

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Mexico City to Oaxaca	350
Mexico City to Acapulco	290
Mexico City to San Blas.....	661
Mexico City to Morelia.....	222
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	Miles.
Monterey to Acambaro.....	478
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Benson to Guaymas.....	353
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Minatitlan to San Cristobal.....	200
San Cristobal to Coban	150
San Cristobal to Guatemala City	205

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Coban to Santo Tomas	140
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Retalhuleu to Quezaltenango	40
Retalhuleu to Escuintla	65
Escuintla to Santa Ana.....	85
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Sonsonate to San Miguel (by coast).....	115
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San Miguel to Chinandega.....	120
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Tejutla to Cojutepeque	42
Tejutla to San Miguel	126
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Matina to Panama	290
Matina to Aspinwall.....	275
Panama to a point 7° north 77° west.....	250
Aspinwall to a point 7° north 77° west	300

DISTANCES MEASURED BY THE FRENCH EXPEDITION (ALONG THE ROADS).

Quezaltenango to Totonicapan	15
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Ahnachapan to Apaneca.....	9
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San Salvador to Cojutepeque	26
Cojutepeque to San Vicente	19
San Vicente to San Miguel	65
San Miguel to La Union.....	32

DISTANCES IN SOUTH AMERICA.

	Miles.
Point 7° north 77° west to Quidbo	95
Quibdo to Cartago	80
Cartago to Popayan	160
Popayan to Quito	240
Quito to Cuenca	205
Quito to Riobamba	105
Cuenca to Alausi	55
Cuenca to Cerro de Pasco	600
Cerro de Pasco to Cuzco	350
Cuzco to Jujuy	1,321
Jujuy to Tucuman	220
Tucuman to Buenos Ayres	773
Buenos Ayres to Valparaiso	870
Cartago to Buga	60
Buga to Cali	35
Cali to Popayan	65
Popayan to Pasto	110
Pasto to Quito	132
Riobamba to Macas	90
Macas to Moyobamba	250
Moyobamba to Cuzco	640
Moyobamba to Cerro de Pasco	370
Point 7° north 77° west to Antioquia	80
Antioquia to Medellin	45
Medellin to Honda	90
Medellin to Cartago	108
Honda to Bogota	110
Honda to Neyva	150
Honda to Cartago	115
Neyva to La Plata	50
La Plata to Popayan	52
Popayan to Nanta or Oran	510
La Plata to Nanta or Oran	500
Popayan to Moyobamba	585
La Plata to Moyobamba	605
Nanta to Cuzco	650
Oran to Cuzco	690
Nanta to Quito	485
Neyva to Moyobamba	650

DISTANCES GIVEN BY CORTES "BOLIVIA."

	Potosi.	Santa Cruz.	Oruro.	La Paz.	Cochabamba.
	Miles.	Miles.	Miles.	Miles.	Miles.
Sucre	87	372	225	30	195
Potosi		459	195	342	282
Santa Cruz	459		480	87	357
Oruro	195	480		282	123
La Paz	342	627	147		270
Cochabamba	282	87	357	123	

FROM CHURCH'S "ROUTE TO BOLIVIA."

	Miles.
Jujuy to Potosi	420
Jujuy to Cochabamba	717
Jujuy to Oruro	615
Jujuy to La Paz	762
Jujuy to Rosario	836
Rosario to Buenos Ayres	240
Curumba to Santa Cruz	570

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Jauja to Tarma.....	34

Total length of Putumayo in a straight line about 600 miles.

Raimondi says that the usual length of the legua is about 5 kilometers (varas 5983) or 3.1 miles.

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MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State and reports of the International American Conference touching improved postal and cable communication between the United States and other American States.

JULY 3, 1890.—Read, referred to the Committee on Appropriations, and ordered to be printed.

POSTAL AND CABLE COMMUNICATION.

To the Senate and House of Representatives:

I transmit herewith a letter from the Secretary of State, inclosing the recommendations of the International American Conference for the establishment of improved facilities for postal and cable communication between the United States and the several countries of Central and South America.

I can not too strongly urge upon Congress the necessity of giving this subject immediate and favorable consideration, and of making adequate appropriations to carry the recommendations into effect; and in this connection I beg leave to call attention to what was said on the subject in my annual message. The delegates of the seventeen neighboring Republics which have so recently been assembled in Washington, at the invitation of this Government, have expressed their wish and purpose to co-operate with the United States in the adoption of measures to improve the means of communication between the several Republics of America. They recognize the necessity of frequent, regular, and rapid steam-ship service, both for the purpose of maintaining friendly intercourse and for the convenience of commerce, and realize that without such facilities it is useless to attempt to extend the trade between their ports and ours.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 2, 1890.

DEPARTMENT OF STATE,
Washington, July 2, 1890.

To the PRESIDENT:

I beg leave to submit to your attention three reports adopted by the International American Conference, recently in session at this capital, demonstrating the necessity of additional means of postal and cable communication between the United States and the ports of Central and South America, and recommending the immediate adoption, by the sev-

eral Governments interested, of measures to furnish adequate transportation facilities for the convenience of passenger travel and trade.

The report of the Committee on Communication upon the Gulf of Mexico and the Caribbean Sea presents a series of facts touching the existing means of transportation for submission to the early consideration of Congress. It shows that the Republic of Mexico and the Republics of Central America, although containing a population and wealth that are but a fraction of our own, and with public revenues that do not compare with those of the United States, are doing more than this Government to maintain a commerce that is of much greater importance and advantage to us than it is to them. They pay as subsidies to steam-ships carrying the United States flag the sum of \$101,000 annually; while the Government of the United States paid the same vessels but \$24,160 during the last fiscal year.

The report states that while "the present lines of steamers between the ports of the United States and the countries bordering on the Gulf of Mexico and the Caribbean Sea furnish a tolerable service, an objection is found in the length of time consumed in making the voyages. At present, a letter mailed on the first of the month in St. Louis will not arrive at Colon before the 15th. It requires two days to reach New York, and then, if the steamer sails immediately, the time is reduced to twelve days; but as the steamer sails but three times a month, it is oftener twenty days in making the passage. Freight requires a much longer time, in some cases thirty or thirty-five days. By the establishment of faster and more direct lines of steamers, the time could be shortened at least one-third, and the expense of freight transportation reduced in a corresponding degree."

The report further shows that "trade is no longer done to any extent by correspondence. The buyer and seller must meet each other. Acquaintance fosters confidence, and confidence is the foundation of all trade. Wherever foreign merchants have obtained mastery in the markets of Latin America, it has been by sending agents to study the tastes and the wants of the buyers, and to lay before them samples of the merchandise they have to sell, and by furnishing prompt and cheap transportation facilities. Commercial travelers from the United States are seldom, if ever, seen in the mercantile cities of the Southern countries, and the buyers for those markets seldom visit the warehouses of the merchants of the United States. This is in a large part attributable to the lack of proper means of communication. The merchant of any of these countries can take his state-room upon a swift steamer, and after a comfortable and restful voyage spend a month in examining the manufactures and show-rooms of European countries. He can make the acquaintance of those who are seeking his custom and establish his credit, and buy whatever he finds suitable for his customers."

The report points out many other advantages that might be derived from more rapid and frequent means of communication, not only with the ports of Central America and the Spanish Main, but with those of the west coast of South America also, which has a foreign commerce exceeding \$100,000,000 a year. "The distance from the ports of Chili to those of Europe through the Straits of Magellan is nearly 9,000 miles, and the voyage requires more than thirty days; while from Peru and Ecuador the distance and time are much greater. A line of fast steamers from the United States to Colon, in connection with a similar one down the west coast of South America, would bring Valparaiso within eighteen or twenty days of Chicago and St. Louis. London could be reached from Valparaiso by way of New Orleans or New York in much less time than by the direct voyage through the straits,

and the journey would be so much more agreeable that the passenger, as well as the freight traffic, would be to a great extent diverted to this way."

COMMUNICATION WITH VENEZUELA.

The facilities for communication between the United States and the Republic of Venezuela, through the enterprise of the managers of the "Red D" line of steamers, are ample, and the result upon the commerce between the two countries is very marked. But a few years ago our trade with Venezuela amounted to but \$3,300,000 annually; now it has reached \$14,000,000, and comprises nearly one-half of the total foreign commerce of that country. The value of the trade that has been built up by this line of steamers is confirmed by the fact that 10,000 bales of cotton goods were shipped from the United States in 1888, while in 1880 the entire export amounted to but 1,200 bales.

It is believed that similar results will follow the establishment of adequate means of communication with other Latin-American Republics, under conditions which will enable our steamship companies to compete in freight and passenger rates with the liberally subsidized lines of Europe.

The report of the Conference well observes that "in view of these facts, and of their proximity, and of the small amount required to furnish ample facilities, it seems incredible that the Governments at interest have so long delayed the establishment of means of communication. It is doubtful if anywhere upon the globe there exists an equal opportunity for accomplishing commercial results as beneficial to 85,000,000 people as could be secured at the small cost involved in establishing first-class communication between the ports of these States; and it is confidently expected that the Governments of the several countries, when their attention is properly directed to this subject, and when the small cost of adequate service is pointed out, will adopt the necessary means to secure it."

COMMUNICATION ON THE PACIFIC.

The report touching communication on the Pacific is equally worthy of consideration, and the representatives of the several countries bordering upon that ocean present a recommendation for the co-operation of their Governments for the establishment of one or more lines of steamships of the first class, which shall make regular voyages between San Francisco and Valparaiso and the intermediate ports. They propose a direct subsidy not to exceed 30 cents per gross registered ton for each thousand miles traveled, to be paid by each Government in shares proportionate to its population, and to continue for a period of ten years.

Proposals for the service are to be invited by the Government of the United States at Washington, and the bids are to be opened in the presence of the representatives of the other nations interested. The amount to be paid by the United States in maintaining such a service would be about 67 per cent. of the whole.

COMMUNICATION ON THE ATLANTIC.

A similar recommendation is made by the Conference for the establishment of additional means of communication between the United States and the ports of Brazil, Uruguay, and the Argentine Republic. In consideration of the immense magnitude and value of the commerce of those countries, the lines thus recommended are of the greatest importance.

It is proposed that there be established two distinct lines of steam-ships; one for the transportation of mails, passengers, and through freights, touching only at a single port in each country, with vessels of a capacity not less than 5,000 tons, and of a speed not less than 16 knots per hour. The other is to be an auxiliary line of slower (12-knot) ships to touch at the intermediate ports. It is recommended by the Conference that the United States and the Republic of Brazil enter jointly into a contract for the establishment of the auxiliary line, the cost of the service to be equally divided between them. The expense of maintaining the fast line it is proposed to divide between the four Governments, the United States paying 60 per cent., Brazil 17½ per cent., the Argentine Republic 17½ per cent., and the Republic of Uruguay 5 per cent.; accepting only steamships constructed in the United States, and awarding contracts after advertisement at Washington for a term of ten years.

In order that the recommendations of the Conference may be carried into effect, it will be necessary for Congress to make an appropriation for that purpose, and authorize the Postmaster-General to enter into contracts with steamship owners, with the representatives of the other Republics as parties to the agreement.

Respectfully submitted.

JAMES G. BLAINE.

I.

RECOMMENDATIONS OF THE INTERNATIONAL AMERICAN CONFERENCE AS TO COMMUNICATION ON THE ATLANTIC OCEAN.

First. The Committee on Communication on the Atlantic resolves to recommend to the respective Governments the aiding of one or more lines of steam navigation between ports of the United States and those of Brazil and Rio de la Plata.

Second. The companies receiving Government aid shall establish a fast bimonthly service of steam navigation between the ports of the United States, Rio Janeiro, Montevideo, and Buenos Ayres, and the vessels shall have the accommodations and capacity necessary for the transportation of freight and passengers, and shall carry the mails.

Third. These steam-ships shall only touch at one port of the intermediary countries on the trips to and from Buenos Ayres; but during the quarantine season they shall only discharge mails and passengers and shall not embark anything subject to infection. In the countries of clearance and ultimate destination, they may touch at two ports.

Fourth. The speed of the fast steam-ships shall be at least 16 knots per hour, and they shall be of not less than 5,000 tons, and a time schedule of arrivals at and departures from the ports shall be established in conformity with the speed required.

Fifth. Your committee recommends also an auxiliary line of freight steam-ships, which shall sail twice a month, making not less than 12 knots an hour, and touching at ports of the United States and Brazil. The United States of America and the Republic of Brazil shall pay one-half each of the amounts paid to these vessels, taking into due consideration the contract of the existing line with the latter Government.

Sixth. The awarding of the contract with the steam-ship companies shall take place in the city of New York, bids being solicited of the companies by advertisement in at least five daily newspapers having

the largest circulation in each contracting country. The advertisement shall designate a time within which proposals may be presented, which time shall not be less than ninety days. The bids are to be opened in the presence of the representatives appointed for this purpose by the Governments interested.

Seventh. Bidders must state the tonnage of the vessels, in accordance with article four, and the amount of Government aid required, calculating the latter at the rate per ton for every 1,000 miles, and also the amount of payment for the round trip.

Eighth. The Governments reserve the right to reject all bids if, in their judgment, they should be excessive.

Ninth. The states shall have the right to impose their flag and register upon the vessels to a number proportionate to the percentage of the aid they pay. In that case it is understood that the quota of each nation shall be paid directly to the vessel or vessels carrying its flag. In case of war each state may use as transports and arm as cruisers, upon payment therefor, the vessels carrying its flag.

Tenth. The vessels receiving Government aid, whatever flag they may carry, shall enjoy in the ports of the contracting Governments all the rights and privileges accorded to national vessels for the sole purpose of international commerce, but not including rights to coastwise trade.

Eleventh. The contracting Governments shall contribute aid to the fast line in the following proportion:

	Per cent.
The United States.....	60
The Argentine Republic.....	17½
Brazil.....	17½
Republic of Uruguay.....	5

Twelfth. The contracting states shall accept only vessels constructed in the United States, in consideration of the higher aid paid by that Government.

Thirteenth. The term of the contract shall be ten years.

Fourteenth. The Committee recommends to the Governments interested the encouragement of direct cable lines to connect the countries represented in said Committee with regular service and equitable rates.

Fifteenth. The Republics of Bolivia and of Paraguay hereby agree to the plan of the Committee, and will contribute to the payment on condition that the companies agree to establish subsidiary lines of river navigation that shall reach their ports.

II.

REPORT OF THE COMMITTEE ON COMMUNICATION ON THE PACIFIC OCEAN AS SUBMITTED TO THE INTERNATIONAL AMERICAN CONFERENCE.

The Committee on Communication on the Pacific has the honor to propose that it be recommended to the Governments represented in the Conference and whose territories border on the Pacific Ocean, with reference to transportation companies:

First. That the nations lying along the western coast of the American continent, and represented in this Conference, agree to subsidize one or more lines of steam-ships of the first class, which shall make regular voyages between the port of San Francisco, in the State of California, United States of America, and that of Valparaiso, in the Repub-

lic of Chili, and the intermediate ports. Said vessels shall make bi-monthly round trips, at least, to each port; shall be of not less than 4,000 tons capacity, with triple expansion engines of not less than 3,500 indicated horse-power, and a minimum speed of 15 knots per hour. The vessels so employed shall be suitably constructed for the transportation of passengers as well as freight, and first class in every respect, with all modern improvements.

Second. That the companies or individuals owning said vessels shall transport both passengers and freight thereon between all the ports of said coast which can be safely visited; and that they shall not enter directly or indirectly into any arrangement or combination with any other company or individual to increase the rate of passage or freight by sea or land, and no preference shall be given one ship over another.

Third. That the nations named shall pay annually, directly to the company, companies, or individual owners of said lines, as a compensation for the services rendered them and in the terms and under the conditions established, a subsidy, the total amount of which shall not exceed thirty cents per gross registered ton of said vessels, for each 1,000 miles sailed, outward and homeward.

Fourth. That the subsidy provided for in the preceding article shall be distributed among the subscribing nations in proportion to their population, as determined by their last census, and in default of such data, by the most reliable official sources. As an approximate proportion the following figures are indicated :

United States.....	\$65,000,000
Mexico.....	12,000,000
Guatemala.....	1,300,000
Salvador.....	750,000
Honduras.....	500,000
Costa Rica.....	250,000
Nicaragua.....	500,000
Colombia.....	4,000,000
Ecuador.....	1,000,000
Peru.....	3,000,000
Bolivia.....	2,500,000
Chili.....	3,000,000
	<hr/>
	93,800,000

Fifth. That the bids shall be presented in Washington, before the Federal Government of the United States; and the proposals therefor shall be published in not less than three daily newspapers among those having the largest circulation, and also in each of the countries contributing to said subsidy. The advertisement shall describe the service required; the frequency of the proposed voyages; the dimensions, speed, and conditions of said vessels and such other details as the subscribing nations may deem proper to enumerate. The period of one hundred and twenty days shall be allowed for the presentation of bids, and the same shall be opened in the presence of the representatives of said nations, authorized to this effect; the bidders shall conform to the rules prescribed by said representatives, who shall have the right to accept or reject the bids which may be offered.

Sixth. That the vessels of the subsidized line or lines shall register in the merchant marine of the countries referred to in these recommendations, whenever the Government interested shall require it, in proportion to the quota of subsidy paid by each.

Seventh. That in the event of war between one or more of the countries subscribing to the subsidy with any of the nations represented in the Conference, the vessels of said line registered in such merchant

marine shall register under the remaining countries, in the proportion indicated, until a state of peace shall be established.

Eighth. That whatever be the flag of the subsidized vessels they shall enjoy in the ports of the contracting Governments, in all that pertains to international commerce, the rights and privileges of national vessels, including the coasting trade in those countries in which it is or may hereafter be declared free.

Ninth. That this convention shall last ten years, at the expiration of which it shall be considered extended ten years, provided that twelve months before the expiration of said period formal notification of its dissolution shall not have been given. Such dissolution may be partial; and in such event the nation or nations separating shall be exempt from the payment of said subsidy.

TELEGRAPHIC COMMUNICATION.

The committee on communication on the Pacific has the honor to propose that it be recommended to the Governments represented in the Conference and whose countries border on the Pacific Ocean, with respect to telegraphic communication:

First. That government aid be given to the company which shall connect the principal ports of the nations bordering on the Pacific by means of a submarine telegraphic cable, whose termini shall be, for the present, the port of San Francisco, in the United States of America, and that of Valparaiso, in Chili; taking as a basis for the purpose of determining the total amount of aid that the cost of transmission for each word shall be less than the minimum amount now charged by the existing companies, at whatever distance the city or locality to which the cablegram is addressed may be situated.

Second. That the total amount of aid agreed upon shall be paid by the Governments interested, in the proportion established for the payment of the aid to the steam-ship transportation companies; proceeding, with respect to the presentation and acceptance of bids, in accordance with the fifth article of its report on communications on the Pacific.

POSTAL COMMUNICATION.

The committee on communication on the Pacific has the honor to propose that it be recommended to the Governments represented in the Conference, and whose countries border on the Pacific Ocean, with respect to postal communication:

That the Governments with which this committee is concerned, and all of which have accepted the convention entered into in Paris on the 1st of January, 1878, for a "Universal Postal Union," adopt the conventions as to postal drafts and as to the exchange of postal money-orders, respectively entered into, at the said city of Paris, on the 4th of June, 1878, and 3d of November, 1880; or, that they enter into special conventions, having the same ends in view.

RECOMMENDATIONS AS ADOPTED.

"The International American Conference resolves: To recommend to the Governments of the countries bordering on the Pacific Ocean to promote among themselves maritime, telegraphic, and postal communications, taking into consideration, as far as compatible with their own interests, the propositions formulated in the report of the committee on communication on the Pacific."

III.

*REPORT ON COMMUNICATION ON THE GULF OF MEXICO AND THE CARIBBEAN SEA.**The President of the International American Conference :*

The committee appointed to consider and report upon the best means of extending and improving the facilities for commercial, postal, and telegraph communication between the several countries represented in this Conference that border upon the Gulf of Mexico and the Caribbean Sea has the honor to submit to the Conference the following report:

TELEGRAPHIC COMMUNICATION.

Telegraphic communication is carried on between the different countries by means of lines which connect the principal cities of the several countries. It seems that the service meets all requirements, and is to be considered satisfactory.

Cable communication is carried on by means of two lines between the United States and the republics of the south. One of them connects Galveston, Tex., with Mexico, Guatemala, Salvador, Nicaragua, Costa Rica, and the countries on the west coast of South America. The other goes from Tampa, Fla., to Havana, round the south coast of Cuba to Kingston, Jamaica, and from there to Ponce de Leon, Porto Rico; thence by way of the Windward Islands to Trinidad, and across to the coast off Venezuela. The rates charged by both of these companies make it impracticable to do much business over their lines, and all but the most imperative messages are reserved for the mails.

We recommend that steps be taken to secure a moderate scale of charges over the present cable lines, and in the event that this can not be accomplished, would suggest the necessity of granting charters to one or more independent cable companies under the auspices of the several governments representing the countries at interest; the said companies to be incorporated with provisions that cable tolls shall in no case exceed reasonable maximum rates to be fixed in their charters. We further recommend that larger systems may be used as far as possible. Short single sections between two isolated points can never pay. It is nearly as expensive to maintain a short as a long circuit, and with a system of several cables the only additional expense is the salaries of the staff of operators at the stations.

POSTAL COMMUNICATIONS.

Postal communication between the United States and the countries bordering on the Gulf of Mexico and the Caribbean Sea is governed by the provisions of the Universal Postal Union, and is carried on by several lines of steam-ships, which sail more or less frequently, and carry the mails under the direction of the post-office authorities of the respective governments.

A statement from the Post-Office Department, hereto attached, will show the number and character of these lines, the amount of mail transported, and the compensation paid by the United States Government during the fiscal year ending June 30, 1889.

COMMUNICATION WITH HAYTI.

The facilities for commercial and postal communications between the United States and Hayti are fair, being furnished by the Clyde Steamship Company, whose steamers sail under the United States flag.

VENEZUELA.

The facilities for communication with Venezuela are good, through the enterprise of the managers of the "Red D" line of steamers, running between New York and the ports of that country. During the last few months this company has added to its fleet three fine new steamers equipped with modern improvements, namely, the *Venezuela*, of 2,800 tons, the *Caracas*, of 2,600 tons, and the *Maracaibo*, of 1,260 tons. This line was established by Messrs. Boulton, Bliss & Dallet, of New York, as a necessity to transport the merchandise of that firm. For many years they employed sailing vessels alone, but in 1879 it was decided to substitute steam for sail, and three German steamers were chartered until vessels could be built especially for the trade. All of the steamers are provided with accommodations for passengers and modern improvements for safety, convenience, and comfort. The main line runs from New York to the Island of Curaçoa, from there to Puerto Cabello, and thence to La Guayra, in Venezuela, with a branch line to Maracaibo. Steamers now leave New York every ten days, but it is desired that the service be increased to four sailings per month.

The effect of the establishment of this line of steamers upon the trade of the United States and Venezuela has been very great. But a few years ago the commerce with that Republic was only \$3,300,000; now it amounts to about \$14,000,000 and comprises nearly one-half the total foreign trade of that country. The value of the trade that has been built up by this line of steamers is confirmed by the fact that 10,000 bales of cotton goods were shipped from the United States to that country in 1888, while in 1880 but 1,200 bales were shipped.

There is also a line of steamers sailing once a month from New York to Ciudad Bolivar, on the Orinoco River.

COLOMBIA.

The commercial and postal communications between the United States and the Republic of Colombia are furnished by the Pacific Mail Steamship Company, which sails three times a month from New York to Colon (Aspinwall), the average length of the voyage being from eight to nine days. The Pacific Mail steamers carry mail not only for Colombia, but for the west coast of Central and South America, making connection at Panama with the various lines of steamers on that coast. The Pacific Mail steamers sail under the United States flag. The mail for Savanilla and Cartagena is carried by the Atlas Line of steamers, sailing under the British flag, twice a month, the average length of the voyage being thirteen days. Both of these lines would give a more satisfactory service if the sailings were increased to one per week.

There is also another line, under the Spanish flag, which sails between New York, Cuba, Venezuela, and the United States of Colombia, and is said to receive from the Spanish Government a subsidy of \$243,687.60.

These three lines furnish six sailings a month between New York and the ports of Colombia.

CENTRAL AMERICA.

The mails to Central America are carried either by the Pacific Mail and the Atlas steamers or by the small lines sailing from New Orleans, and, while they are rendering as good service as is practicable under present conditions, it is very desirable that the facilities shall be increased in order that better service may be secured.

MEXICO.

Steam-ship communication between the Gulf ports of the United States and Mexico is limited to the Morgan Line between New Orleans and Vera Cruz—average time three and one-half days, sailing twice a month. By reason of railway communication between the two countries they are not dependent upon steam-ships for mail, passenger, or freight service. Their rapidly increasing commerce, as the result of railroad connection, is an evidence of the benefits that will arise from the establishment of proper communication between other countries.

It will be observed from the study of the annexed report of the United States Post-Office Department that the earnings of all these lines of steamers are derived almost exclusively from the intercourse and trade that these countries maintain with the United States. Very little could be derived from the commerce between the several nations on the Gulf of Mexico and the Caribbean Sea outside of the United States. This is due to a great extent, if not wholly, to the fact that none of these countries are engaged in manufacturing. They all produce similar raw products and their importations are composed of similar merchandise. Manufactured cotton goods, machinery, and provisions compose the bulk of the imports of these countries from the United States, and in their turn they export to the same markets of the United States the same raw materials and tropical fruits. Consequently there is no reason for active trade between the Central American States, and no direct lines between them could be successfully maintained unless they were extended to the United States. They are now in communication by coasting steamers, which almost all of these countries have established, and which call periodically at their ports. We consider, therefore, in view of actual conditions, that we shall have to accept the existing service as the only one that is practicable at present.

THE PRESENT SERVICE.

While the present lines of steamers between the ports of the United States and those of the countries bordering on the Gulf of Mexico and the Caribbean Sea furnish a tolerable service, an objection is found in the length of time consumed in making the voyages; and as much could be gained by the establishment of faster lines of steamers or the substitution of faster steamers for the slow ones now on the existing lines, we recommend that the number of sailings be increased and that the rate of speed be heightened so that the round trips, or at least that the home voyages, to the ports of the United States be made in the shortest possible time, in order that perishable freights may be preserved.

At present a letter mailed on the 1st of the month in St. Louis will not arrive at Colon before the 15th. It requires two days to reach New York and then, if the steamer sails immediately, the time is reduced to twelve days; but, as the sailings are only three a month, it is oftener twenty days in making the passage, and freight requires a much longer

time, in some cases thirty or thirty-five days. By the establishment of faster and more direct lines of steamers time could be shortened at least one-third and the expense of freight transportation reduced in a corresponding degree.

THE REASON BUYERS PURCHASE IN EUROPE.

But trade is no longer done to any extent by correspondence. The buyer and seller must meet each other. Acquaintance fosters confidence, and confidence is the foundation of all trade. Wherever foreign merchants have obtained mastery in the markets of Latin America it has been by sending agents to study the tastes and the wants of the buyers and to lay before them samples of the merchandise they have to sell and by furnishing prompt and cheap transportation facilities. Commercial travelers from the United States are seldom, if ever, seen in the mercantile cities of the southern countries, and the buyers for those markets seldom visit the warehouses of the merchants of the United States. This is in a large part attributable to the lack of proper means of communication. The merchant of any of these countries can take his state-room upon a swift steamer and after a comfortable and restful voyage spend a month in examining the manufactures and show-rooms of European countries. He can make the acquaintance of those who are seeking his custom and establish his credit and buy whatever he finds suitable for his customers.

It will doubtless be several years before quick lines of communication would become self-supporting; and in order to induce capitalists to invest their means in such enterprises they must be assured of certain assistance for a term of years.

SOUTH AMERICAN CONNECTIONS.

It is impossible to estimate the increase of trade that such facilities for communication and transportation would at once bring to the American republics. The purchasing power of the countries of Central America and the Spanish Main is not alone to be considered, but the west coast of South America has a commerce far above \$100,000,000 a year. The distance from the ports of Chili to those of Europe through the Straits of Magellan is nearly 9,000 miles and the voyage requires more than thirty days, while from Peru and Ecuador the distance is much greater. A line of fast steamers from the United States to Colon, in connection with a similar one down the west coast of South America, would bring Valparaiso within eighteen or twenty days of Chicago and St. Louis. London could be reached from Valparaiso by way of New Orleans or New York in much less time than by the direct voyage through the Straits, and the journey would be so much more agreeable that the passenger, as well as the freight traffic, would be to a great extent diverted in this way.

SUBSIDIES PAID BY OUR NEIGHBORS.

From official data before the committee it is plain that the countries bordering on the Gulf of Mexico and the Caribbean Sea appreciate the necessity for direct and quick communication with foreign ports, and for its control in the interest alike of their producers and consumers, and they indicate in their public policies and general convictions that governmental assistance, whether in the form of mail contracts or other-

wise, is essential to the service demanded by public interests. Mexico pays the Pacific Mail Steam-ship Company for the western coast service \$30,000 yearly; Guatemala, \$24,000; Salvador, \$24,000; Nicaragua, \$6,000; Honduras, \$5,000, and Costa Rica, \$12,000, in the form of postal compensation.

PLAN FOR FAST SERVICE FROM TAMPA.

Plans have been discussed by capitalists in this country for the establishment of a direct and rapid steam-ship service between Tampa, Fla., and Mobile, Ala., and the ports of Colon, Port Limon (Costa Rica), and Greytown, Nicaragua. The town of Tampa is situated on the west coast of Florida, 666 miles from Havana and 1,200 miles from Colon, by the measurement of the United States Navy Department. It has a safe and commodious harbor, sufficient to float the largest ships, and without bar or other obstruction at its entrance. The natural advantages of this port have been supplemented by the construction of wharves, docks, hotels, and driveways, and freight can be transported from the railroad cars to the ships at the minimum of time and expense.

The Government of the United States has already established a fast railway mail service between New England, New York, and Pennsylvania, and Tampa, to connect them with the Havana steamers, making the distance from New York City in thirty-six hours, and touching the principal cities of the Atlantic coast, where mails from the West are collected, as the trains pass daily. The distance from Chicago, St. Louis, Cincinnati, and other great cities of the West to Tampa is about the same as that from New York to Tampa and from those cities to New York, and the railway connections are such that a letter from Chicago via Tampa to ports of the Caribbean Sea would have the same advantage of speed and transportation as a letter from New York, and freight from the Western cities for such port would be carried by rail to Tampa as quickly and as cheaply as to New York.

ADVANTAGES FOR WESTERN CITIES.

The distance from Tampa to Colon, taking that port as an illustration, both as to time and mileage, is much less than from New York, the time being five and a half days, while the steamers at present in use between New York and Colon make the journey in eight to nine days. It could not be expected that the exporters of New York would avail themselves of this advantage of time in the shipment of heavy merchandise, for the cost would be much greater if sent part way by rail, but for mail and passengers it would be found very convenient; while the merchants and the manufacturers of Cleveland, Cincinnati, Chicago, St. Louis, and other cities of the West, who produce most of the articles shipped to South America, would not only be able to place their merchandise upon the docks of Tampa in the same time and at the same cost that is required to deliver it in New York, but with much greater convenience and less cost, so far as wharfage and handling at the terminal points are concerned.

The same holds true of merchandise imported into the United States from the southern republics for consumption in the Southern and Western States. The merchants of Chicago, some months ago, sent to the president of this Conference a memorial for the establishment of steam-ship facilities at Tampa, which is in accordance with the forego-

ing facts. The merchants and manufacturers of the southern portion of the United States would derive great benefit by the establishment of the proposed line, and the rapidly developing industries from that section seem to be entitled to special consideration. At the same time, in addition to the advantages already pointed out, all those engaged in trade between the United States and the countries bordering on the Gulf of Mexico, the Caribbean Sea, and the Pacific Ocean would enjoy the great benefits of competition.

With properly constructed steamers, the proposed line would be of incalculable service to those engaged in the shipment of fruit and other perishable articles, which suffer severely from long voyages and bad weather at sea. A very large portion of the fruit coming to the United States from Central and South America is consumed in the Southern and Western cities of the United States, and the same is true of coffee, hides, and other merchandise, while the principal articles of export from the United States come mainly from the same cities; the flour from Richmond and Minneapolis, provisions from Chicago, refined petroleum from Cleveland, and furniture from Grand Rapids, while Georgia and the Carolinas, as well as other Southern States, are largely interested in the shipment of cotton goods.

IMPROVED MAIL AND PASSENGER FACILITIES.

But the greatest advantage to be derived from such a line would be the improvement in mail and passenger transportation between the United States and the ports east, west, and south of Colon, the time from New York to the latter port being shortened to five and a half days or six days, if, as suggested, the proposed steamers make a deviation from a direct line from Tampa to Port Limon and Greytown. The voyage from Tampa to Colon, 1,200 miles, would be made by fast steamers in less than five days, and by rapid railway trains either New York or Chicago could be reached from the latter port in six and a half days. Such an improvement upon present facilities for travel is worthy of the careful consideration of the delegates to this Conference and of the governments they represent.

The plan above suggested for a line of steamers from Tampa to Colon proposes that the steamers, if established, shall visit the city of Mobile regularly to deliver and receive freight after having landed their mail, passengers, and freight at Tampa.

PROPOSED LINE FROM NEW ORLEANS.

There are also many considerations in favor of New Orleans as an outport. The geographical position of New Orleans at the mouth of the Mississippi makes it the natural outlet not only to Central and South America, but to other ports of the world, for the products of the great valley this river drains, which constitute the bulk of the exportable commodities of the United States. The breadstuffs, the provisions, the agricultural machinery and implements, the furniture and petroleum, and the centers of their production are all within convenient distance of water transportation. In many instances the construction of rival railway lines has diverted commerce from natural to artificial channels, but the difference in distance from Chicago and St. Louis to the ports of the Gulf and the Caribbean Sea via New Orleans is so great as to offer advantages over New York as an outport that could not be overlooked if proper steam-ship facilities to these ports were furnished.

There are already several lines of steam-ships of a comparatively insignificant tonnage between New Orleans and the Central American ports. They represent a growing sentiment and a growing sympathy which should be encouraged and fostered by the several Governments interested. These steam-ships have already done much to increase the exports as well as the imports of New Orleans, but they have been established and sustained by private enterprise, the assistance given them by the United States Government having been so small as to be unworthy of consideration compared with the aid extended them by some of the Spanish-American Governments.

It has been maintained before the committee that the portion of the United States most interested in the development of direct traffic between New Orleans and the ports of the Gulf and the Caribbean Sea is that which suffers most from overproduction and has until now been the least interested in the expansion of foreign trade.

NATURAL GEOGRAPHICAL ADVANTAGES.

New Orleans is the terminus of six trunk lines of railway and of 20,000 miles of river navigation. It is the largest port of entry in the South. Its imports during the last fiscal year amounted to \$15,400,000. Of that sum \$10,400,000 was composed of five articles, all of which came from Central and South America, namely, coffee, sugar, fruit, hemp, and india-rubber.

As before stated, the Central American countries already pay a good deal to maintain the existing transportation facilities on the western coast of the continent.

Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, the Republics of Colombia, and of Venezuela bordering upon the Gulf of Mexico and the Caribbean Sea, can be reached by moderately fast steamers from Tampa, Pensacola, Mobile, New Orleans, or Galveston in from three to five days. These countries contain a population of 20,000,000 people, while the population of the United States approximates 65,000,000. It would be difficult to overestimate the benefits that would accrue to all of these States from prompt, regular, and economical means of mail, passenger, and freight transportation.

In view of these facts and of their proximity and of the small amount required to furnish ample facilities, it seems incredible that the Governments at interest have so long delayed the establishment of such facilities. It is doubtful if anywhere upon the globe there exists an equal opportunity for accomplishing commercial results as beneficial to 85,000,000 people as could be secured at the small cost involved in establishing first-class communication between the ports of these States, and it is confidently expected that the Governments of the several countries named, when attention is properly directed to this subject and when the small cost of adequate service is pointed out, will adopt the necessary measures to secure it. Experience demonstrates with reference to transportation facilities:

First. That they should be frequent, rapid, regular, and economical.

Second. That they should be under the control of or friendly to the interests which they are supposed to serve.

And, as before stated, the policy of many of the Governments interested shows that government assistance for the new lines contemplated is regarded as essential from the fact that it requires several years before speedy lines of communication become self-sustaining.

RECOMMENDATIONS AS ADOPTED.

In view of the proximity of all the ports of the Gulf of Mexico and the Caribbean Sea, the advantages that would accrue from increased social, commercial, and international intercourse, their dependence upon proper communication, the improbability that this will be established by unaided private enterprise, the duty of Governments to promote public welfare, the small public expenditures required to secure adequate mail, passenger, and freight facilities, and the necessity for their control by the countries whose interests they should subserve, the International American Conference recommends to all the nations bordering upon these waters the granting of Government aid in the establishment of first-class steamship service between their several ports upon such terms as they may mutually agree upon with reference (a) to the service required, (b) the aid it is necessary to extend, (c) the facilities it will severally afford them, (d) the basis upon which they are to contribute, (e) the amount that each is to pay, (f) the forms of agreement between the several Governments and the nature of contracts with steamship companies necessary to the successful execution of a general plan for such service.

APPENDIX A.

Statement showing the means of communication between the ports of the United States and those of the east coast of Mexico, Central America, Colombia, Venezuela, Hayti, and Brazil, the time required by each line of steamers, the frequency of sailings, the sums of money paid annually to each line for transportation, and the amount of mail transported during the fiscal years ended June 30, 1888, and June 30, 1889.

[Foreign lines are marked with an asterisk (*).]

1. TO MEXICO.

- a. *New York and Cuba Mail.* *New York to Vera Cruz* (via Havana, Progreso, and sometimes Frontera and Campeche)—Average time, ten days; four times a month:
Amount paid during fiscal year ending June 30, 1889, \$1,138.97.
Amount of mail transported, 1889, 4,652 pounds; 1888, 2,938 pounds; increase, 1,714 pounds.
- b. *Morgan Line, New Orleans to Vera Cruz.*—Average time, three and one-half days; twice a month:
Amount paid during fiscal year ended June 30, 1889, \$77.05.
Amount of mail transported 1889, 94 pounds; 1888, 58 pounds; increase, 36 pounds.
- c. *Thebaud Line,* New York to Progreso.*—Average time not known; sailing irregular; about once a month:
Amount paid during fiscal year ended June 30, 1889, \$15.35.
Amount of mail transported 1888, 216 pounds; 1889, 160 pounds; decrease, 56 pounds.
- (d) *New York and Yucatan Line,* New York to Progreso.*—Average time not known; sailing irregular; about once a month:
Amount paid during fiscal year ended June 30, 1889, \$2.73.
Amount of mail transported, 1888, 55 pounds; 1889, 44 pounds; decrease, 11 pounds.
- (e) *Spanish Transatlantic,* New York to Vera Cruz* (via Progreso).—Average time, ten days; twice a month:
Amount paid during fiscal year ended June 30, 1889, \$28.96.
This line was not used in 1888; amount of mail conveyed in 1889, 466 pounds.

RECAPITULATION.

To Mexico, five lines; about ten sailings a month.
Total amount paid during fiscal year ended June 30, 1889, \$1,263.06.
Total amount of mail carried in 1889, 5,416 pounds. Increase over 1888, 2,149 pounds.

1. TO CENTRAL AMERICA.

- (a) *Royal Mail, New Orleans to Puerto Cortez* (via Belize and Livingston).—Average time, six days; five times a month.
 Amount paid during fiscal year ended June 30, 1889, \$3,926.91.
 Amount of mail transported in 1889, 19,030 pounds; 1888, 18,596 pounds; increase, 434 pounds.
- (b) *Morgan Line, New Orleans to Bocas del Toro*.—Average time not known; twice a month.
New Orleans to Bluefield.—Average time, six days; twice a month.
 Amount paid during fiscal year ended June 30, 1889, \$725.16.
 Amount of mail transported, 1889, 2,925 pounds; 1888, 1,891 pounds; increase, 1,061 pounds.
- (c) *Oteri's Pioneer Line, New Orleans to Truxillo* (also to Ceiba, Ruatan, and Utilla).—Average time, four days; four times a month:
 Amount paid during fiscal year ended June 30, 1889, \$628.71.
 Amount of mail transported, 1889, 3,544 pounds; 1888, 2,078 pounds; increase, 1,465 pounds.
- (d) *Honduras and Central American line.* New York to Greytown* (via Kingston, Jamaica).—Average time, seven days; twice a month:
 Amount paid during fiscal year ended June 30, 1889, \$390.12.
 This line was not used in 1888. Amount of mail conveyed in 1889, 5,713 pounds.
- (e) *Atlas Line,* New York to Port Limon* (via Kingston and Colon).—Average time not known; three times a month: (see also under 3, Colombia):
- (f) *Costa Rica and Honduras Line,* New Orleans to Port Limon*.—Average time, seven days; three times a month:
 Amount paid during fiscal year ended June 30, 1889, \$602.62.
 Amount of mail transported, 1889, 8,160 pounds; 1888, 4,790 pounds; increase, 3,370 pounds.
- (g) *New Orleans and Central American Line,* New Orleans to Truxillo*.—Average time, four days; twice a month:
 Amount paid during fiscal year ended June 30, 1889, \$50.15.
 Amount of mail transported, 1889, 637 pounds; 1888, 221 pounds; increase, 416 pounds.

RECAPITULATION.

To Central America, seven lines; about twenty-three sailings a month.
 Total amount paid during fiscal year ended June 30, 1889, \$6,322.67.
 Total amount of mail carried in 1889, 40,009 pounds; increase over 1888, 12,460 pounds.

3. TO COLOMBIA.

- (a) *Pacific Mail Steamship Company, New York to Colon*.—Average time, eight days; three times a month:
 Amount paid during fiscal year ended June 30, 1889, \$21,160.84.
 Amount of mail transported, 1889, 148,630 pounds; 1888, 116,408 pounds; increase, 32,222 pounds.
- (b) *Atlas Line,* New York to Savanilla* (via Colon and Cartagena).—Average time, thirteen days; three times a month:
 Amount paid during fiscal year ended June 30, 1889, \$2,140.79.
 Amount of mail transported in 1888, 27,336 pounds; in 1889, 26,932; decrease, 404 pounds.
- (c) *Spanish Transatlantic,* New York to Savanilla* (via Santiago, Cuba).—Average time, thirteen days; once a month:
 Not used during fiscal year ended June 30, 1889.

RECAPITULATION.

To Colombia, three lines; about seven sailings a month.
 Total amount paid during fiscal year ended June 30, 1889, \$26,301.63.
 Total amount of mail transported in 1889, 175,562 pounds; increase over 1888, 31,818 pounds.

4. TO VENEZUELA.

- (a) *Red "D" Line, New York to Laguayra* (via Curacao); branch line to Maracaibo.—Average time ten days; three times a month:
 Amount paid during fiscal year ended June 30, 1889, \$5,733.81.
 Amount of mail transported, 1889, 27,775 pounds; 1888, 23,773 pounds; increase, 1,002 pounds.

(b) *Theband Line,* New York to Ciudad Bolivar*.—Average time eleven days; once a month:

Amount paid during fiscal year ended June 30, 1889, \$40.47.

Amount of mail transported 1889, 806 pounds; 1888, 554 pounds; increase, 252 pounds.

RECAPITULATION.

To Venezuela, two lines; four sailings a month.

Total amount paid during fiscal year ended June 30, 1889, \$5,774.55.

Total amount of mail transported in 1889, 28,581 pounds; increase over 1888, 1,254 pounds.

5. TO HAYTI.

(a) *Clyde Line, New York to Cape Hayti*.—Average time, seven days; once a month:

Total amount paid during fiscal year ended June 30, 1889, \$1,614.70.

Amount of mail transported in 1888, 5,955 pounds; in 1889, 1,388 pounds; decrease, 4,567 pounds.

(b) *Atlas Line, New York to Port au Prince*.—Average time, seven days; three times a month:

New York to Jacmel and Aux Cays (via Kingston, Jamaica).—Average time not known; twice a month.

Amount paid during fiscal year ended June 30, 1889, \$2,140.79.

Amount of mail transported, 1889, 8,800 pounds; 1888, 4,639 pounds; increase, 3,161 pounds.

During the fiscal year ended June 30, 1889, there were irregular sailings from New York to Hayti by various other steamers, to which was paid the total sum of \$148.64, and which conveyed 799 pounds of mail.

RECAPITULATION.

To Hayti, two lines; six sailings a month.

Total amount paid during fiscal year ended June 30, 1889, \$3,904.13.

Total amount of mail transported in 1889, 28,329 pounds.

6. TO BRAZIL.

(a) *United States and Brazil Steamship Company, Newport News to Rio de Janeiro and Santos*.—Average time to Rio de Janeiro, twenty-four days; once a month:

Amount paid during fiscal year ended June 30, 1889, \$13,722.90.

Amount of mail transported, 1889, 69,648 pounds; 1888, 68,240 pounds; increase, 1,408 pounds.

(b) *Red Cross Line,* New York to Para, Ceara, and Pernambuco*.—Average time not known; about once a month.

Amount paid during fiscal year ended June 30, 1889, \$110.47.

Amount of mail transported, 1888, 2,190 pounds; 1889, 1,216 pounds; decrease, 974 pounds.

(c) *Booth Line, New York to Para, Maranhão, Ceara, Manaos*.—Average time not known; about once a month.

Amount paid during fiscal year ended June 30, 1889, \$165.70.

Amount of mail transported in 1889, 1,511 pounds; 1888, 1,004 pounds; increase, 507 pounds.

(d) *Sloman's Line,* Baltimore to Rio de Janeiro*.—Average time not known; about once a month:

Amount paid during fiscal year ended June 30, 1889, \$643.45.

Not used in 1888; amount of mail conveyed in 1889, 10,257 pounds.

RECAPITULATION.

To Brazil, four lines; about four sailings a month.

Total amount paid during fiscal year ended June 30, 1889, \$14,642.52

Total amount of mail transported in 1889, 82,632 pounds.

N. B.—Mails for Uruguay, the Argentine Republic, and Paraguay are conveyed by the above lines to Rio de Janeiro and thence to Montevideo and Buenos Ayres by steamers of foreign lines.

There are occasional sailings from New York for Montevideo and Buenos Ayres direct, but they are so rare and occur at such irregular intervals as to be practically of no value to the mail service.

Nothing is known at this office regarding the number and character of the steamers employed on any of the above lines, nor as to their accommodations for passengers.

APPENDIX B.

Special report on Colombia submitted to the committee by the Delegate, Mr Climaco Calderón.

Hon. MANUEL ARAGÓN,
Chairman of the Committee on Communication on the
Gulf of Mexico and the Caribbean Sea:

SIR: I have the honor to present to the committee of the International American Conference of which you are chairman the following information relative to Colombia, requested by you in your note dated the 23d of last December. At the same time I beg to submit to the consideration of the committee some observations which I deem necessary for the proper understanding and appreciation of said information.

The maritime communication between Colombia and the United States is at present carried on by the following steam-ship lines: Atlas, Pacific Mail, Spanish Transatlantic, and Red D Line.

The first is an English line, established some time ago, whose steamers call regularly at the ports of Carthagena and Savanilla, which are the principal ports of Colombia on the Atlantic. This line dispatches two vessels regularly every month from New York, and in them is carried the greater part of the goods exported from this country to Colombia destined for the Atlantic coast and the markets of the departments of Antioquia, Tolima, Cundinamarca, Boyacá, and part of Santander, in the interior. On the return voyage they bring the greater part of the articles imported from Colombia into the United States, which they take on board at the ports of Savanilla and Carthagena.

The American line called Pacific Mail dispatches a steamer regularly on the 1st, 10th, and 20th of each month to the port of Colon. The only articles of American production carried by this line to Colombia are those consumed in the department of Panama, which includes the entire Isthmus, and the department of the Cauca on the Pacific. The importations of this latter department are entered at the ports of Buenaventura and Tumaco, to which all the merchandise transshipped at Panama is carried by the vessels of the Pacific Steam Navigation Company and of the recently established South American Steamship Company.

The Spanish Transatlantic Company only sends one vessel a month to Colombia. The steamers of this line touch at Havana and other ports of the Island of Cuba, and carry merchandise to the Colombian ports of Carthagena, Savanilla, and Santa Marta.

The steamers of the American line known by the name of Red D Line, sailing regularly between New York and the Venezuelan ports of La Guayra and Puerto Cabello, do not put in at any Colombian port, but they carry the American products which are imported into the northern part of the department of Santander in Colombia, and carry to New York the articles which that region exports to the United States. These steamers touch at Curaçoa, and from thence the merchandise destined to a considerable part of Venezuela and the department of Santander are transported to the port of Maracaibo in steamers of the same line. At Maracaibo the same vessels take on board the products exported from this part of Colombia to the United States, and those sailing between New York and La Guayra and Puerto Cabello take them on board at Curaçoa, together with those which, in a more limited quantity, are sent to the same market from the province of Padilla in the Colombian department of the Magdalena.

The postal service between Colombia and the United States is carried on by these same lines of steamers, although the Spanish Transatlantic line does but little of it on account of the length of its route and the slowness with which they necessarily carry the mail. Colombia also has a postal system well established and organized, but subject to the obstacles naturally offered by the undeveloped condition of its interior means of communication.

With regard to telegraphic communication, Colombia has all that is at present needed, considering its present commercial and industrial condition. The length of the telegraphic lines now in operation measures more than 4,600 kilometers, and it may be said that all the towns of any importance, no matter how small they are, can communicate with each other and with all the countries of Europe and America, by means of the cable which touches at the ports of Colon, Panama, and Buenaventura. The telegraphic system of Colombia connects at the north with that of Venezuela, and at the south with that of Ecuador; so that Colombia is at present in possession of easy, frequent, and rapid communication with those two Republics.

The latest statistics published by the Government of Colombia on the exterior import and export trade of the country refer to the year 1887. We find therein that the exports, not including those of the department of Panama, which enjoys freedom from import duty, reached in that year the sum of \$14,000,000. The export of natural products from the Isthmus may be estimated at \$1,200,000; and it may therefore

be said that the exports of Colombia reached in the year 1887 the sum of \$15,200,000. According to official documents published by the United States Government,* the exports of Colombia to that country in the fiscal year ending June 30, 1889, amounted to \$4,263,519, without including in this sum the gold and silver, coined or in bullion, imported from Colombia in the same year, which appear in the said documents and amount to \$1,642,795. It also appears therein that the exports of the United States to Colombia in that fiscal year amounted only to \$3,703,705, or \$1,194,298 less than those of the year ending June 30, 1888, in which they amounted to \$4,923,259. With respect to the imports brought from Colombia, precious metals not included, it may be observed also that in 1889 they were less than the previous year. It appears, in fact, that in 1888 they amounted to \$4,393,258, or \$129,739 more than in the year following.

Unlike what has been said of Colombia, Mexico, the Central American Republics, and Venezuela figure in the statistics as having exported more to the United States in 1889 than in 1888. With regard to Mexico it would perhaps not be exaggerating to say that, taking into consideration the total amount of its export trade, the increase is something remarkable, for it appears that in 1889 Mexico sent to this country products to the value of \$21,253,601, or \$3,923,712 more than in the year 1888, in which it only exported to the United States \$17,329,889. The Central American Republics, which, in 1888, exported to the United States \$7,623,378 worth, are put down in 1889 for \$8,414,019; that is, with an increase of \$790,641. The increase of the exports of Venezuela is less noticeable, because in 1888 they were \$10,051,250 and \$10,392,569 in 1889, making a difference of \$341,319 in favor of the latter year. The difference between the exports of Colombia in 1888 and those of 1889 is, however, of slight amount (\$129,739), and may be easily and satisfactorily explained by the decrease of value in this market of some of the principal articles which Colombia exports. The difference is certainly of value and not of bulk.

According to the recent report of the United States Treasury Department, the exports of Mexico, the Central American Republics, Colombia, and Venezuela to this country during the last ten years are as follows:

Year.	Mexico.	Central America.	Colombia.	Venezuela.
1880.....	\$7,210,000	\$3,310,000	\$8,440,000	\$6,040,000
1881.....	8,320,000	3,160,000	5,990,000	6,600,000
1882.....	8,460,000	4,740,000	4,960,000	5,750,000
1883.....	8,180,000	5,120,000	5,170,000	5,800,000
1884.....	9,020,000	6,160,000	3,890,000	6,670,000
1885.....	9,270,000	6,410,000	2,340,000	6,310,000
1886.....	10,690,000	5,910,000	3,010,000	5,790,000
1887.....	14,720,000	7,640,000	3,950,000	8,260,000
1888.....	17,330,000	7,620,000	4,390,000	10,050,000
1889.....	21,253,601	8,414,019	4,263,789	10,392,569

Upon examination of the above table it is evident that the exports of Mexico, Central America, and Venezuela to the United States have increased notably in the last few years, while those of Colombia have decreased. With regard to Mexico, it is seen that the exports in 1889 exceeded those of 1880 by \$14,040,000, which means an increase of two-thirds. The exports of the Central American Republics, which in 1880 were only \$3,310,000, amount in 1889 to \$8,414,000, making an increase of \$5,104,000 in the course of ten years. Venezuela, which in 1880 exported \$6,040,000, increased its exports \$4,352,000 in 1889, since in that year they amounted to \$10,392,000. On the other hand, Colombia, which in 1880 exported to the United States products to the amount of \$8,440,000 saw its exports reduced in 1889 to \$4,263,000, which marks a falling off of \$4,177,000, equivalent to one-half.

With regard to the importation of American merchandise, comparing that of 1880 with that of 1889, it is also observed that while those of Mexico, the Central American Republics and Venezuela have steadily increased, those of Colombia have decreased in a marked manner. Mexico, which in 1880 only imported \$6,070,000 worth, imported \$10,890,000 worth in 1889, and there was one year (1883) in which its imports amounted to \$14,370,000. Those of the Central American Republics, which in 1880 only amounted to \$1,730,000, reached \$4,150,000 in 1889. Those of Venezuela, which were only \$2,270,000 in 1880, passed \$3,000,000 in 1888, and in 1889 amounted to \$3,700,000. Those of Colombia were \$5,230,000 in 1886, \$5,180,000 in 1881, \$6,230,000 \$5,970,000 in 1887, \$4,920,000 in 1888, and \$3,730,000 in 1889. There was, therefore, a

*Annual report of the Chief of the Bureau of Statistics on the foreign commerce of the United States for the year ending June 30, 1889.

in 1882, \$6,720,000 in 1883, \$6,170,000 in 1884, \$5,400,000 in 1885, \$5,290,000 in 1886, decrease of \$1,500,000 in the importations of the last-named year as compared with those of 1880.

The decrease of exportation from Colombia to the United States began to be felt in a marked manner in 1881. In fact, from \$8,440,000, the sum reached in 1880, they fell to \$5,990,000 in that year, showing a decrease of \$2,450,000. They were still less in 1882, since they only reached \$4,960,000; and although a slight rise of \$290,000 is noted in 1883 over the previous year, the decrease is still more notable in 1884, in which they only reached \$3,890,000, or less than one-half of the amount reached five years before. The marked diminution of the exports of 1885, in which year they only amounted to \$2,340,000, and those of 1886, which scarcely reached \$3,010,000, is explained by the civil war in which the country found itself at that time; for, after order was re-established, it is seen that they not only recovered their previous level, but underwent an increase, although but a slight one, over the exports of 1884, the year immediately preceding the civil war.

Upon comparing the importation of American merchandise entered at Colombia during the years 1882-'87 with the exports made from Colombia to the United States in the same period, a considerable inequilibrium is observed. It is, moreover, to be noted that the excess of imports over exports reached the sum of \$1,270,000 in 1882, \$1,550,000 in 1883, \$2,280,000 in 1884, \$3,060,000 in 1885, \$2,280,000 in 1886, \$2,020,000 in 1887, and \$530,000 in 1888; making a total of \$12,990,000 in seven years. The year 1889 already exhibits a difference of \$530,000 in favor of exports, and everything leads one to believe that in the current fiscal year they will exceed the imports. The inequilibrium observed is, however, easily explained.

At the same time that the decrease of exportation commenced in Colombia, the work of excavating the canal was begun at Panama, and the Isthmus increased considerably its importation and consumption, paying for them not with its own products, but with the money belonging to that enterprise. The difference between the importation and exportation above noted was not liquidated with specie sent out by Colombia, nor by the sale of Colombian articles in European markets; it was paid from the funds of the French stockholders. This explains why, while the exports of the years 1885-'86 fell to so low a figure on account of the disturbances in the peace of the country, the imports did not decrease in those years in the same proportion. The consumption of the Isthmus increased, while that of the rest of Colombia diminished. But the diminution of the work on the canal in 1888, and its final suspension in 1889, brought with it a reduction in the amount of consumption. This explains the notable decrease of importation during those years. The exceptional circumstances in which the Isthmus of Panama found itself from 1881 to 1888 increased the consumption of foreign goods in an extraordinary manner; but they in no wise contributed to augment either the exports of the rest of the country or of that region itself. Since the imports of the country are at present reduced to what can be paid by exports, the figures of both in the year 1889 show us what is the amount of commerce between Colombia and the United States in normal conditions.

Among the intertropical countries of America, Colombia has perhaps been the most deeply affected by the decline of commerce and industry which, with variable intensity, has made itself felt all over the world during the last fifteen years. None of them have seen, as Colombia has, their exports so greatly diminished, nor found themselves, as she has done, on account of her peculiar topographical condition, surrounded by so great obstacles to utilizing the forces which the decay of her ancient industries has left idle. With regard to tobacco, which was previously cultivated in abundance and exported to the value of several millions of dollars, it may be said that at present only a sufficient quantity is produced for home consumption, since exorbitant customs duties, which might be called prohibitive, have driven it away from the former markets.

The exportation of cinchona bark has entirely ceased. In order to appreciate properly the importance which this product had in the external trade of Colombia, it must be borne in mind that on account of the immense quantities of it exported from that country, her exports to the United States amounted to \$12,284,063 in 1875, or \$8,021,000 more than in 1889; and in order to estimate the influence which the production of Colombia had in the market of that product, it is sufficient to recollect that quinine, which is extracted from it, that in 1876 was only sold at the rate of 6s. 9d. per ounce, in 1877, on account of an interruption in the exportation of cinchona from Colombia occasioned by civil war and obstructions to the navigation of the Magdalena River, went up to the unheard-of price of 16s. 9d. (\$4.70) per ounce. The price of this chemical product began to fall in 1879, and from 1883 onward it declined with such rapidity that the current price in Europe in 1887 was only 1s. 6d. (30 cents) per ounce, or even still less. The last quotations of the London market give this same price in the present month to English quinine, and 1s. 3d. to that of German production.

The decline in price of an article of such general and constant consumption as this is not difficult to explain. It is a well-known fact that ten or twelve years ago the produc-

tion of cinchona was a kind of monopoly with some countries of the northern part of South America, where the tree producing the bark grows wild in surprising profusion. But the carelessness, lack of method and system, in the collection of the bark, gave rise to the fear that the production of so necessary an article would greatly decline, and perhaps even become exhausted, and, actuated by this fear, the Governments of Holland and Great Britain decided to attempt the cultivation of the cinchona-tree in their colonies of Java and the East Indies. The first seeds and plants were carried thither from South America in 1861, and the first exportation of bark from that region to Europe, consisting of only 24 ounces, was made in 1869. The production of it in the Island of Ceylon was growing so enormously from year to year that in the year of 1882-'83 6,925,000 pounds of it were exported from that place; from 1883 to 1884, 11,500,000 pounds; and from 1885 to 1886, 15,364,912 pounds.* The exportations of Java have been smaller in quantity, but not less important, since in 1887 they exceeded 2,200,000 pounds. The necessary result of such an immense production was the rapid decline in the price of this raw material and of the article extracted from it. To this depreciation further contributed two other causes, the influence of which it is impossible to ignore. In the first place, the South American bark generally yielded but 2 per cent. of sulphate, while that of Ceylon and Java, due to the cultivation of the tree, produced from 8 to 12 per cent. In the second place, because of the discovery and employment of new and more economic processes, there can actually be obtained, with less expense and in the course of three or five days, a greater quantity of quinine than was before extracted in twenty days by means of the processes which were then employed.

The exportation of cinchona bark from Colombia having entirely ceased, a greater impulse was given to the cultivation of coffee, until this product became the principal article of export. But coffee, like hides and all the natural products which Colombia exports, has suffered an enormous decline in the market because of competition with other countries which produce them with greater advantage; and this is explained why an increase in the volume of exports does not signify for Colombia a proportional increase in the value of the same.

Colombia, like other Spanish-American countries, contends with the difficulties which nature has opposed to convenient, rapid, and economical communication, in its own territory, and which make the transportation of its products to the sea-coast extremely difficult and expensive. It is this lack of ways of communication and of transportation which constitutes the most powerful obstacle to the economical and industrial development of those countries.

Because of the imperfect and backward state of the means of transportation employed the exports are limited to articles which, of small volume and little weight, are intrinsically valuable; and with respect to said articles they are compelled to challenge the competition of producers who, disposing of abundant capital and provided with improved implements of labor and easy, economical, and rapid means of transportation, offer these same articles in the market at prices which are occasionally ruinous for the producers who do not possess identical advantages for their production and transportation. "Railways and steam-ships," said the French economist, Leroy Beaulien, "are the levelers of prices; there is no influence so potent as theirs." The general depreciation of articles of universal consumption confirms this opinion, should such statement need demonstration. Wheat, wool, cotton, silk, petroleum, linseed-oil, coffee, and tea, copper, lead, iron, quicksilver, silver, tin, coal, quinine, paper, nitrate of soda, beef, sugar, hides, cheese, and fish are articles of universal consumption, and their actual price is much less than fifteen years ago, due to a greater and more economical production, stimulated by the increase of consumption, caused by the facilities and low rates of water and land transportation.

The decline in the price of some of these articles is really surprising. Thus, for example, refined petroleum which in 1873 was worth 23.59 cents a gallon, fell in 1887 to 6½ cents. Refined sugar, in bond for export, which in 1880 was only worth 5.08 cents a pound in New York, declined still more, and there was a time (July, 1887) when it only brought 2.37½ cents a pound. Salt beef for export, which averaged in the United States in 1884 only 8.2 cents a pound, dropped to 6 cents in 1886. Salt pork declined during the same period from 8.2 to 5.9 cents; bacon and hams from 9.6 to 7.5 cents, and lard from 9.4 to 6.9 cents.

The immediate and necessary effect of the present system of transportation by railway and steam-ship has been uniformity in the prices of the necessary commodities and the final disappearance, in all civilized countries, of local markets with enormous differences in the prices of such articles. It does not happen to-day, as formerly, that the loss of the crops in a province, or even in an entire country, will expose the inhabitants to the horrors of famine. An eminent American economist has well

*According to the last statistics the production of Ceylon has been diminishing since 1886. It appears that from 1886 to 1887 it was 14,389,184 pounds; from 1887 to 1888, 11,704, 932 pounds; and from 1888 to 1889, 10,798,487 pounds.

said that the railway and steam-ship have already decided that in the future there will be but one market for cereals—the world; and he adds that abnormal prices in one country or market, or excessive reserves in one center or another, will be surely and rapidly neutralized and controlled by the influence of all countries and markets.

But the improvement and progress in the means of communication which produce these results, and by bringing together the remotest regions make the world a single market and level and equalize prices, far from diminishing, widen and deepen the line which separates civilized countries from those which have not reached an equal degree of prosperity and development. Doubtless these less-favored countries participate also, although in a very limited way, in the benefits which such transformation has produced. Considered in their relation to the rest of the world, it is observed that those countries which lack railways actually obtain, at a lower price than formerly, foreign articles of necessary consumption. The reduction in the cost of production and in maritime fares explains the reduction in prices.

But, as producers and exporters, the only influence which might help to lower the cost of transportation of their commodities to foreign markets and allow them to contend with the competition of those who produce them under better and more favorable conditions, is not always felt, because their limited trade offers no field to competition and generally falls into the hands of steam-ship lines which monopolize it and impose upon it excessive burdens, thus reducing to the least figure the earnings of the exporter. Undoubtedly, the countries which are found in such condition possess great advantage in the fact that the maritime communications at their service may be more rapid and convenient and, especially, cheaper. But, more than new lines of steam-ships and great facilities for maritime communication, these countries need railways, which shall develop their domestic trade, and shall enable them to import the heavy and bulky apparatus which their industry lacks, and transport to the sea-coast their agricultural products and the fruits peculiar to their soil; the dye, cabinet, and timber woods which abound in their forests, and the ores of their inexhaustible veins.

The export trade of these countries is not limited by the lack of maritime transportation, but by the production which finds in the absence of railways the principal obstacle to its development. The day in which it shall increase there will be no lack of steam-ships to contend in the ports for the freight which will arrive there for foreign markets, and that will bring from the latter the products which shall be sent in return. New lines of steam-ships which may be established now will divide the existing traffic, but will not increase it. Colombia desires to possess better and more convenient means of communication with the United States than she actually has, but her foreign trade can not support more steam-ships than those employed now. She desires cheaper and better means of transportation, but not in greater number. If her production and export trade increase, her maritime communications will surely improve, just as Venezuela has seen hers improve with the growth which her exports have lately experienced.

CLÍMACO CALDERÓN,
Delegate from Colombia.

WASHINGTON, *January 27, 1890.*

CABLE SERVICE.

Mexican, Central, and South American Telegraph Company rates via Galveston.

Countries.		From any point in United States east of the Rocky Mountains.	From any point in United States west of the Rocky Mountains.	From any point in Louisiana and Texas except Galveston, from which deduct 5 cents from following rates.
		Per word.	Per word.	Per word.
Salvador	} Libertad *	\$0.72	\$0.72	\$0.68
Guatemala				
Honduras				
Nicaragua	} San Juan del Sur † .....	.97	.98	.93
Costa Rica				
United States of Colombia	{ Panama .....	.97	.98	.93
	{ Colon .....	.97	.98	.93
	{ Buenaventura ‡	1.09	1.10	1.05
Ecuador	{ St. Elena §	1.74	1.75	1.70
	{ Guayaquil §	1.74	1.75	1.70
	{ Payta	1.89	1.90	1.85
Peru	{ Callao	1.83	1.84	1.78
	{ Lima	1.72	1.73	1.68
	{ Mollendo	2.44	2.45	2.40
Bolivia, all points .....	.....	2.09	2.10	2.05
	{ Arica	2.25	2.26	2.21
	{ Iquique	2.25	2.26	2.21
Chili	{ Antofagasta	2.25	2.26	2.21
	{ Caldera	2.25	2.26	2.21
	{ Serena	2.25	2.26	2.21
Argentine Republic	{ Valparaiso	2.25	2.26	2.21
	{ Inland stations in Chili	2.25	2.26	2.21
	{ Buenos Ayres and other places in the Argentine Republic,	1.82	1.83	1.72
Uruguay	Montevideo and other places in Uruguay	2.00	2.01	1.96
Paraguay	{ Asuncion and other places in Paraguay	1.82	1.83	1.78
	{ Rio Grande	2.09	2.10	2.05
	{ Sta. Catarina	2.09	2.10	2.05
Brazil	{ Desterro	2.09	2.10	2.05
	{ Santos	2.09	2.10	2.05
	{ Pernambuco	1.69	1.70	1.65
	{ Maranham	2.59	2.60	2.55
	{ Pará	2.59	2.60	2.55
	{ Ceará	2.59	2.60	2.55
	{ Other places North of Rio	1.89	1.90	1.85
	{ Other places South of Rio	2.09	2.10	2.05

* To all places beyond Libertad in Salvador, Guatemala, and Honduras add 5 cents per word in addition to the rates to Libertad.

† To all other places beyond San Juan del Sur in Nicaragua and Costa Rica, add 5 cents per word in addition to the rate to San Juan del Sur.

‡ To all places beyond Buenaventura in United States of Colombia, add 5 cents per word in addition to rate to Buenaventura.

§ To all other places in Ecuador, 10 cents per word in addition to the rate to Guayaquil.

Inland Government line stations in Brazil, 15 cents to be added to coast station rates.

In Central and South America addresses, the name of places, such as Buenos Ayres, Buenaventura, will be counted as one word, irrespective of the ten-letter or compound word rule.

Cable rates (per word) via Cuba, West Indies, and Windward Islands.

Stations.	East of Mis- sis- sippi.	West of Mis- sis- sippi.	Stations.	East of Mis- sis- sippi.	West of Mis- sis- sippi.
Nicaragua.....	\$2.50	\$2.50	South America—continued.		
Costa Rica.....	2.54	2.64	Peru:		
San Salvador (La Libertad).....	2.57	2.67	Payta.....	\$3.00	\$3.10
Guatemala.....	2.62	2.72	Lima and Callao.....	3.17	3.27
Honduras.....	2.62	2.72	Havana.....	.50	.60
Mexico:			Cienfuegos (see note).....	.44	.54
Salina Cruz.....	2.76	2.86	Santiago (see note).....	.44	.54
Hayti:			Jamaica.....	1.35	1.45
Mole St. Nicholas.....	1.67	1.77	Porto Rico.....	2.08	2.18
(To other places in Hayti charge			St. Thomas.....	2.17	2.27
25 cents for additional postage.)			St. Croix.....	2.22	2.32
San Domingo:			St. Kitts.....	2.35	2.45
All points.....	2.17	2.27	Antigua.....	2.41	2.51
Island of Curaçoa.....	2.25	2.35	Gnadaloupe:		
South America:			Basse-Terre.....	2.49	2.59
Venezuela:			Point-à-Pitre.....	2.51	2.61
La Guayra.....	2.24	2.52	Capesterre.....	2.51	2.61
All other points.....	2.43	2.53	Dominica.....	2.55	2.65
United States of Colombia:			Martinique:		
Buenaventura.....	2.57	2.67	Fort-de-France.....	2.60	2.70
Other places.....	2.62	2.72	St. Pierre.....	2.60	2.71
Aspinwall (Colon).....	.97	.97	St. Lucia.....	2.66	2.76
Panama.....	.97	.97	St. Vincent.....	2.73	2.83
Ecuador:			Grenada.....	2.83	2.93
Guayaquil.....	2.82	2.92	Barbadoes.....	2.84	2.94
Santa Elena.....	2.82	2.92	Trinidad:		
			Port of Spain.....	2.94	3.04
			Other places.....	2.96	3.06

NOTE.—To the word rate to Cienfuegos add \$2.25 for ten words or less and 22 cents for each word over ten. To the word rate to Santiago add \$3.00 for ten words or less, and 30 cents for each word over ten.

Cable rates per word from London to Central and South America.

	Rate.		Rate.
<i>South America.</i>		Ecuador:	
Argentine Republic.....	\$1.72	St. Elena and Guayaquil.....	4.37
Bolivia:		Paraguay.....	1.72
La-Paz.....	3.47	Peru:	
All other offices.....	1.88	Arequipa, Islay, Mol'endo.....	3.35
Brazil:		Puno, Callao, and Lima.....	3.80
Pernambuco.....	1.47	Payta.....	4.37
Fortaleza, Maranhão, Pará, and		Uruguay:	
offices between Pernambuco and Pará		Montevideo, etc.....	1.96
(Region du Nord).....	1.67	<i>Central America (via Brazil).</i>	
Rio de Janeiro and all offices between		Costa Rica.....	6.55
Rio and Pernambuco (Region du Centre)		Guatemala.....	6.78
tre).....	1.67	Honduras (Independent).....	6.78
All offices south of Rio (Region du Sud)		Nicaragua:	
Chili.....	2.16	San Juan del Sur.....	6.49
Colombia (United States of):		All other offices.....	6.55
Buenaventura.....	4.66	San Salvador:	
Colon.....	4.70	La Libertad.....	6.72
Panama.....	4.70	All other offices.....	6.78
All other offices.....	4.70		

NOTE.—To ascertain the cost of a cablegram from Washington to the above-mentioned offices in Central and South America via London, 28 cents per word, the rate to Great Britain, Ireland, France, and Germany from Washington, should be added.

APPENDIX C.

STATEMENT OF WILLIAM H. T. HUGHES, OF NEW YORK.

The CHAIRMAN (Mr. Aragon). The committee will proceed at once to the consideration of the business before it. The committee is sitting to-day for the purpose of inquiring into the feasibility of extending commercial relations between the United States and the countries bordering on the Gulf of Mexico and the Caribbean Sea. Gentlemen have come before us to-day for the purpose of giving us their ideas in respect to this matter, and we will proceed with the hearing, taking the views of each gentleman in his turn.

We will proceed first with the hearing of Mr. William H. T. Hughes.

Mr. HUGHES. Mr. Chairman, I did not come here prepared to make an argument before your committee. I came to this city with the idea in my mind that the Committee I was to meet to-day was the Committee on Communication on the Atlantic. I prepared a paper to read before that committee. The theories I advance in my paper, so far as steam-ship lines are concerned, are substantially the same as I would advance to you. If your committee would like to hear it read, I will do so.

The CHAIRMAN. Upon the general topic I suppose your paper would apply as well to the subject before us as to the subject before the Committee on Communication on the Atlantic.

Mr. HUGHES. This paper applies as well to this committee as to the other. The main object of this Conference, as I understand it, is to develop trade between the United States and the countries south of us, and to bring the peoples of this great hemisphere into more friendly relations with one another; and it seems to me that the most important part of the work of the Conference, if my idea of its object is correct, devolves upon the Committee on Communication. No trade can be developed to any extent without constant, rapid, and frequent communication between the countries desiring to trade together. To develop trade between any two nations it is, in my opinion, absolutely necessary that the people of those two nations should intermingle and exchange views, study each other's wants, and become intimately acquainted. So long as there is no communication of a good, rapid, and cheap nature there will be no trade. To illustrate my idea I would say that while the distance from New York to Philadelphia is far greater than that to many small towns in its immediate vicinity, Philadelphia is virtually nearer New York than these towns. Why? Because there are fast and comfortable trains at a reasonable price every half hour during the day to Philadelphia, and if I want to go there to attend to some business I can start out in the afternoon from New York, attend to my business, and be back at my own home at my usual hour of retiring. Whereas to the smaller towns around our great metropolis, did I wish to go there in the afternoon it would be necessary for me to stay all night, I believe in the same way, in fact I know it to be so, that if I could run down to Buenos Ayres in fifteen days instead of thirty-five or forty, as it would take me with the present facilities, in good steamers, at a reasonable rate of passage, I should make the trip at least once a year, perhaps twice, have a talk with my correspondents, get to know them and their wants better, and have a more intimate knowledge of the business which I was doing, and of the standing and financial responsibility of my correspondents, which is in itself the basis of all business.

I firmly believe that had we had for the past five years a line of steam-ships running from New York to Monte Video and Buenos Ayres in fifteen or sixteen days the business relations between the two countries would have been so extended that there would have been no necessity for the Conference which you gentlemen from the Argentine Republic and Uruguay are to-day attending. The only American line of any importance on the Atlantic is the United States and Brazil Mail Steam-ship Company, which has had to struggle hard to keep afloat, and which sails from New York for Brazilian ports only about once every twenty or thirty days, and by being forced to touch at so many ports to eke out an existence destroys its usefulness as far as the development of trade is concerned, owing to the amount of time that it takes between its terminal points. The schedule time, for instance, of the ship which left New York on the 8th instant makes her due at Rio Janeiro on the 4th of February, or, say, twenty-seven days, and this, to my mind, entirely destroys her usefulness as a trade developer. The question naturally arises, if this is so, why do they not run faster? Simply because the trade is not yet sufficiently developed to pay for separate lines being run from New York to all the different ports at which it touches, and capitalists are naturally averse to putting their money into any enterprise from which an immediate revenue can not be derived, and which would show a heavy loss before any profit could be anticipated. It therefore becomes necessary for the Governments interested in developing trade between their various countries to come to the aid of

the merchant marine until such time as the business shall be sufficiently established to make the line self-supporting. The policy and success of Great Britain in developing trade with her colonies and with foreign countries has fully proven that this theory is a correct one. Germany and France are to-day following in these foot-steps. Italy is paying handsome subsidies to fast steam-ship lines to such countries as her people trade with, and even Spain is to-day a liberal supporter of steam-shiplines to all parts of the world.

Last March I had the pleasure of submitting my views as to "How to develop our trade with the countries south of us" to the Business Men's Republican Association, of the city of New York, and shall hand your committee a copy of that address for their perusal. I firmly believe that the views therein submitted are correct; that the best and speediest way of establishing such lines as we require is the one suggested in that address, viz: that the Government guaranty to the stockholders in the companies which may be formed to run such lines as are required, a given percentage on their capital; but I am told by men more experienced in legislative matters than I am that it would be impossible to get such a guaranty from our Congress.

The bill now before Congress, known as the "tonnage bill," and which is in part based upon the French bill of a like nature, already in successful operation, will no doubt materially aid the development of the American merchant marine, but in special instances where a long distance and rapid service is required I fear that it will be necessary to make some arrangement whereby a greater compensation than that suggested in the bill referred to, viz: 30 cents per registered ton for every one thousand miles sailed shall be given. At all events for four or five years, until such time as the steam-ship shall have made the business.

I have lately given some time to the study of the establishment of a direct steam-ship service between New York, Uruguay, and the Argentine Republic, and have gone so far as to get out plans and estimates for the ships that I consider best adapted to such service, and believe that if the tonnage bill passes I shall be able to carry out my project, provided I can also get some assistance from the governments of the Argentine Republic and Uruguay. These ships, with the speed that I propose to give them, making only one stop for coal and provisions on the road would, on a careful estimate, leave a loss to the owners, until such time as the freight and passenger traffic was fairly developed, and it seems to me that it will be money well invested for the Governments of the United States, Argentine Republic and Uruguay to jump into the breach and meet such loss, as once the trade is developed the countries themselves would be the gainers.

My idea has been to build three ships, of an average speed of 16 knots, with which, with proper facilities for prompt handling of cargo at Montevideo and Buenos Ayres, I could probably make a departure about every twenty days from New York; but to properly extend the business there should be a direct departure from New York to the River Plate at least once every ten days, or even once a week, but to bring this about at the rate of speed indicated, and with boats of a suitable size, would require a capital of between \$5,000,000 and \$6,000,000, and unless liberal support could be counted upon from the governments interested, I am afraid that the requisite capital would be difficult to obtain. I know that this project is looked upon by many so-called bright business men as a visionary idea; but all men who have attempted to start anything a little ahead of their times have been called visionary. When my good friend, Hinton Rowan Helper, first spoke to me about his great railroad project from end to end of the three Americas, I not only thought he was visionary, but I seriously considered whether it was not my duty to apply to the proper authorities to have him confined in a lunatic asylum. I now think that he was simply a man a little ahead of his time. I apologize to him for my previous views, and firmly believe that if I am allowed to remain on this earth for ten years longer I shall live to see his great project realized, and that we shall step into a vestibule train on the Pennsylvania Railroad at New York and run through without change of cars to my native city of Buenos Ayres. If this can be done, may it be my privilege to pave the way for this far greater enterprise by aiding its development with the establishment of a steam-ship line worthy of connecting the two greatest republics of the world.

John Roach, the greatest Irishman that ever came to America, whose memory should be enshrined in the heart of every man who takes an interest in the merchant marine of America, was called a dreamer and a lunatic, and was crushed in his declining years by the political scheming of men unworthy of the honor of latching his shoes, but his spirit still lives, and the magnificent line of coasters on our eastern shores, and the fleet of cruisers we have just sent abroad to carry our flag across the Atlantic, are the greatest monuments to his memory. I had the privilege of calling him my friend, and if any effort of mine can aid in extending that line of American ships down the east coast of South America, yes, and through the Straits of Magellan, and up the west coast again to the entrance of California's Golden Gate, I shall feel that his friendship was not wasted upon me, and that the seeds that his patriotism, energy, and indomitable zeal have sown have borne good fruit.

Should the governments interested coincide with my views and aid in the establishment of such lines as are necessary, let them insist on a fast service and a low rate of passage; the freight rates will take care of and equalize themselves. The banking facilities required to aid in the development of commerce will naturally follow the establishment of rapid communication, and the intermingling of the people, which rapid communication and low passage rates would bring about, would develop the trade.

The only countries with which we to-day do a large business, and for which we are not dependent on London for banking facilities, are Cuba and Mexico. Why? Because we have constant and rapid communication with those countries; because the people intermingle and know one another, and because the constant intercourse has taught them that they can buy what they want in the United States, and that we can make the goods and machinery they require as well as any European nation. As an apt illustration, that rapid and frequent communication and friendly intercourse is the best and only mode of increasing commercial relations, is the fact that in 1880 our exports of machinery and agricultural implements to Mexico only amounted to about \$400,000, and that in less than ten years they have increased to \$4,000,000.

The point now arises, from what port in the United States should the lines of steamers I have suggested start? To this there is but one answer, viz, New York. Boston, Philadelphia, Baltimore, and New Orleans will all argue that if the Government subsidizes steam-ships, they should all be entitled to the same advantage as New York, but this is not so, for New York is the central point, and there is where the ships will get the most of their freight and the most of their passengers, and until such time as the trade shall be sufficiently extended to warrant the establishment of lines from other ports, I claim that all the lines I have suggested should run from New York to the ports indicated.

Let us hope, gentlemen, that before the opening of the great international exhibition of 1892 in the city of New York, all these steam-ship lines shall have been established, and that all you gentlemen delegated to this Conference, and thousands upon thousands of your countrymen, will visit us and so enlarge our commercial, and friendly relations as to prove the wisdom and forethought of the able minds that inaugurated and brought about this Conference, which shall live in history as one of the greatest events known to the world.

Service between this country and South America or Central America by sailing vessels will not do. That was tried for years and years and it failed. As an illustration I will state something that I know thoroughly. For instance, take crushed sugar, which is manufactured in the United States. At one time I exported large amounts of crushed sugar to South America. Why do I not do it now? Because they have to cable for crushed sugar, and if it goes in a sailing ship it is indefinite when it will arrive, and it is apt to get damp in transit. The correspondent in South America, on the other hand, can cable to France or England, where there are steamers leaving every few days, and they will know just when that sugar will get there and that it will get there in good condition too, and of course my business is cut out. They can cable from South America to France or England thirty days later than cabling to me and get their sugar before I can get it there.

Our banking facilities are bad because we have not the communication. It is a rare thing to see a draft on Europe for merchandise going to Cuba or Mexico, because there is close communication between those countries and ours, and they know each other, and the standing of the people there is known, whereas to deal with a country whose people you know nothing about is out of the question.

Mr. HANSON. Is it not a fact, though, that business in Cuba and Mexico is done on a much shorter time than in the South American states? Are not the credits shorter?

Mr. HUGHES. Not in the business that is done with the United States. It is true the credit system in business with Europe is on longer time, but that comes back to my argument, namely, that the reason for that is because there is more communication with Europe and those South American people, and their standing is thoroughly familiar to the people they are dealing with. I was talking with Mr. Bliss on the subject. He does a little business with South America in dry goods. He told me that if he could jump into a steamer and go there and get back quickly, he would just as soon trust a man there who was good, as a man in the United States who is good. He says, however, that he does not know them, and the reason that he does not know them is that there is no communication. For instance, if you wanted to go down there and went aboard an Atlas steamer and looked at it, perhaps you would conclude not to go. If, on the other hand, you could go in a comfortable ship, and you had had a talk with Mr. Aragon, and he invited you to go with him to his country you would do so. You would do so because you could travel comfortably and rapidly. Of course in all business matters we can do more business in five minutes' conversation than in five years' correspondence. You can do in ten minutes' conversation with a man what you would do in correspondence in ten years. Again, a merchant likes to deal with

a man he knows. Now, as an instance, I will cite this case: I never met Mr. Aragon before I came here, and if I wanted to know anything about Costa Rica, I would write to Mr. Aragon, knowing he would give me the information I desired. If I had never seen him and did not know what kind of a man he was, and had only heard of him casually, he would not have my confidence like he has it now from personal contact. If I am sitting in my office and a man comes in to see me I form an idea in my mind as to whether I will trust him or not. I can not explain why. It is instinct. You can not form that idea from a man's correspondence.

We do five-eighths of our whole business with the Argentine Republic. After an experience of twenty years as a commission merchant I have discovered that when our correspondent comes up here and remains a few months that we find new things to deal in. He picks up samples of a dozen things and that finally realizes a new business.

MR. GUZMAN. Of course these steamers must be built in the United States because of the laws of this country not permitting a vessel built in a foreign land to carry the flag of the United States.

MR. HUGHES. Yes, sir; they must be built here.

MR. GUZMAN. Is your idea that this assistance shall come in the shape of a subsidy, or a mail contract?

MR. HUGHES. My idea is that the best way to do it is for the Government to lay out different routes of steam-ship lines and guaranty a percentage on the capital. That can not be done; the thing has been carefully studied here by the people interested and we have come to the conclusion that the only relief for the merchant marine that can be got through Congress is the tonnage bill. We have had several meetings and we have discussed it among men well posted, and it seems to me that is the most feasible thing that can be got through Congress.

MR. GUZMAN. Is there not a bill now before the Senate which was presented by Senator Frye, looking to this sort of thing?

MR. HUGHES. Yes, sir; I see by the papers that there is such a bill. I have not read it.

MR. GUZMAN. And then there is a bill authorizing the Postmaster-General to enter into contracts with steam-ship lines for carrying the mails from the United States. Now is not such a contract practically a subsidy?

MR. HUGHES. Yes, sir; it is a subsidy.

MR. GUZMAN. And in any shape that a subsidy is established it will answer the purpose?

MR. HUGHES. Yes, sir; in any shape.

MR. GUZMAN. Whether by a mail contract, or upon a tonnage basis, or in any other way?

MR. HUGHES. Yes; the basis of the whole thing is this, that there is not business enough to support the ships that are required for the purpose of developing the trade. What we want is to increase the speed and bring the countries closer together.

MR. GUZMAN. If the subsidy comes in the shape of mail contracts to carry the mails of the United States only, then the United States would have to pay for it?

MR. HUGHES. Yes, but you can make a contract with the other countries to carry their mails back. The United States mail is the mail out. According to the postal convention, I believe, every country has to take care of its own mail. The United States paid the Brazil line a subsidy some years for carrying their mail.

MR. GUZMAN. Let us suppose that a line of steamers is established from New York to Colombia and then enters into a contract to carry United States mails, and they receive so much a year for the same. Then Colombia, on the other hand, must pay so much for bringing their mail here.

MR. HUGHES. That is what Colombia ought to do. It ought to be done jointly in some manner so that the Governments may insist upon a certain power and certain speed. Let them guaranty a given time between this port and that port, and provide for a forfeit if the steam-ship line does not live up to its contract.

MR. GUZMAN. But a steamer from New York to Aspinwall would not only carry the Colombia mail, but mails that would come that way from all parts of South America.

MR. HUGHES. Well, it would depend upon how much each Government is benefited.

MR. GUZMAN. And you will have to calculate how much service each country received from that line in order to ascertain the proportion of subsidy each company should pay?

MR. HUGHES. Yes.

THE CHAIRMAN. About what size ship do you think would be required for the kind of service you indicate?

MR. HUGHES. A steamer half the size of the one you saw launched the other day would be sufficient. That ship cost, ready for sea and with a speed of something over 15 knots, about \$460,000. That includes, of course, cabin fittings, etc., ready to go to sea.

MR. GUZMAN. So far as you decrease the size of the vessel, you at the same time decrease its speed, do you not?

Mr. HUGHES. Not necessarily, because you can put the power in to drive anything fast. Of course you would require more power, comparatively, to drive as fast a shorter than a longer steamer.

Mr. GUZMAN. What is the difference between the price of coal in the United States and in England?

Mr. HUGHES. There is no difference. The nominal price of soft coal is \$3.50 a ton alongside the ship. In buying it by yearly contract for a steam-ship line you do better than that. It costs \$225,000 a year per ship for the coal used in the Gulf trade. That is for passenger ships.

Mr. HANSON. It will not be practicable to run steamers to all the ports on the Caribbean Sea and Gulf of Mexico in order to get quicker communication between there and here, because it would require too many lines. What do you think of putting on station steamers that would collect the traffic at the minor ports and take the same to the central port where these fast steamers touch?

Mr. HUGHES. That is a failure. The rehandling knocks around the freight too much. Costa Rica has a large fruit trade that could be developed with the United States if that country had fast communication with this country; but every time the packages are knocked about the fruit is damaged. The more ports you call at the more you destroy the use of that boat as far as the development of trade is concerned.

Mr. HANSON. The question is, whether the business is sufficient to justify a large number of lines. If you had station steamers to collect the fruit, for instance, and bring it to a central point, would not the development of that system overcome to some extent the drawback of the deterioration of the fruit on account of extra handling? I mean, of course, with this quicker service that we speak of.

Mr. HUGHES. In the fruit business, of course the speed of delivery is what you want. You not only damage fruit by keeping it tied up for a long time, but you also damage it by handling.

Mr. HANSON. Are those small boats that run to Greytown?

Mr. HUGHES. They are pretty tough specimens. There is another advantage in having fine boats between those countries and this. If you send a fine American-built boat to those ports, the people of those countries will go aboard it and examine it. You will find that these South American people have quite a mechanical turn about them, and they judge your capability by the manner in which your boat is built.

HOW TO DEVELOP OUR TRADE WITH CENTRAL AND SOUTH AMERICA.

[A paper read by William H. T. Hughes at the first general meeting of the Business Men's Republican Association of the city of New York, March 8, 1889.]

What is the fundamental question of the many now agitating the minds of our leading thinkers and legislators? I claim this question to be the labor question. Some of you may not agree with me, but for the sake of argument I ask you to admit it for the present. If the labor question is the fundamental question, how are we to solve it? By finding employment for all our surplus labor. How are we to find employment for our surplus labor? By keeping all our factories, mills, ship-yards, iron furnaces, and manufactories running on full time, and if necessary building more. How are we to do this? By finding a market for our surplus products that we can not consume at home, and thus enable the manufactories to keep up the price of the article at home to a paying basis. Where is the market for our surplus products to be found? In South and Central American countries, the business of which naturally belongs to us. How are we to get the business of these countries, and how are we to induce them to stop consuming the products of Europe, to which they have been accustomed for so many years, and induce them to take ours in their stead? By opening up communication with them, by inducing their citizens to visit us, and by showing them that we can furnish them what they require as well or better than England, France, Germany, and other European countries with whom they have heretofore been doing all their business; by showing them that we can furnish them with good cotton goods, honestly made of good cotton that will stand washing, and that is not filled with gums and fuller's-earth to increase their weight; that we can furnish them with good, honest axes, made of good steel, and good hardware of all descriptions, good provisions of every kind; that we can furnish them with locomotives, railroad cars, lumber, plows, mowers, reapers; yes, and steam-ships if they want them. In all of which they will find good value for money, and all of which we can make adapted to their requirements better than any nation on earth. But I hear you say, "How can we do all these things?" "How can we get the business of these countries?" "How can we induce their citizens to visit us when we have no steam communication with them to bring them to our shores, and no banking facilities to aid us in

the transaction of business such as they find in any large European city?" That is just where I want to get. We have no steam-ship communication with them, and we have no banking facilities to aid us in doing business with them. These two things are the key to the whole situation, and give us the reason why our European neighbors have almost entirely cut us out in the supplying of our South and Central American cousins. Without steady, regular, and speedy transportation, and without banking facilities, business with any foreign country is an impossibility. Now, then, what is the most economical and expeditious manner of obtaining these two requisites to the development of our foreign trade?

(1) Let Congress enact a law appointing a commission of merchants of recognized ability and integrity; men who are beyond the idea of using their appointment to promote a job of any kind; men whose standing in the community will be sufficient guaranty to the public that what they do or recommend to be done will not be for the benefit of any section or ring, but for the benefit of the country at large, and men who thoroughly understand what is requisite to develop this South and Central American business. And let this commission of merchants thoroughly study the question, and advise the Government as to what lines of steam-ships are required to develop the business with the various important business centers in Central and South America. Let them lay out all the routes required to open up the trade, then let Congress pass a law authorizing the President or the Post-Office Department to advertise for a fast and regular service to these ports weekly, fortnightly, or monthly, as may be required, and let the Government guaranty to the stockholders in the company or companies, which may be formed for this purpose, 10 per cent. on their capital for ten years. Let me say here in explanation that 10 per cent. on the capital of a steam-ship company is not excessive, as it is perfectly fair to allow 5 percent. for depreciation. To compensate the Government for this guaranty let it require that the rates of passage be kept at a figure so low that it will induce travel to our ports. The freight rates will take care of themselves, or rather, I might say, will be taken care of by the British ocean tramp, who is always careful to be on hand when a good freight is going, or when any one else has built up and developed a good business. Let them require that the ships be built in the best manner, of great speed, 16 to 18 knots, if you please, or even more; let them be built in such a manner as to be a credit to our country, and the flag which they carry, and that they shall meet all the requirements of the Navy Department for fast cruisers or commerce destroyers, and in the event of war let the Government, in consideration of their guaranty, have the right to take these vessels should they need them, either at a fixed price for purchase or at fixed price for charter at the time they may require them. This will do away with the necessity for a naval reserve bill and provide the Government in case of war with the finest fleet of fast cruisers in the world at a comparatively small expense.

(2) Let Congress give a special charter for a bank with capital sufficient to enable it to have agencies in all the principal cities of Central and South America, this being requisite of the charter, and, if necessary, let us guaranty, this bank, 3, 4, or even 5 per cent. on its capital, which should not be less than \$10,000,000, to enable it to do the business that would be required of it—the capital of the banks engaged in this South American business in London alone far exceeding any such amount as I have named, and all of whom are to-day doing a profitable business. Take, as an instance, The London and River Plate Bank (limited), in London, whose business is exclusively with the Argentine Republic, having branch banks in Montevideo, Buenos Ayres, Rosario de Santa Fé, and Cordova, which, during this last fiscal year, paid the stockholders 15 per cent. besides passing a round amount to its reserve fund. And this is only one of the several banks in London devoted to the business between Great Britain and the Argentine Republic.

(3) As soon as we have established our steam-ship lines and our banks, and thus shown the people of these countries that we desire to trade with them, and have furnished the means to develop this trade, let us appoint capable men as ministers to these countries. Instead of spending their time attending dinner parties and flirting with the ladies, let these gentlemen earn their salaries by negotiating reciprocity treaties with these countries, and endeavor to carry out the principle which the lamented Arthur endeavored to inaugurate with the Cuban treaty, so ably negotiated by our ex-minister to Spain, the Hon. John W. Foster, but which the Democratic President withdrew from the Senate as one of his first official acts, because it did not meet the views of that enlightened and distinguished gentleman who has so ably filled the post of Secretary of State during his administration, and who has succeeded in making us the laughing stock of almost every civilized government.

Suppose all this to have been done. What would be the result?

(1) We should open the eyes of the people of these countries to the fact that we existed as a great nation, capable of building our own ships and doing our own carrying trade, a fact which many of them may well have reason to doubt, as our flag is at present almost if not quite unknown to most of them, and I think I can safely say,

although it may be a chestnut to many of you, that England has fully demonstrated the fact that commerce follows the flag.

(2) By having good, safe, speedy, and cheap means of travel to our ports, the people of these countries would be induced to visit us instead of going to Europe regularly, as great numbers of them now do, and their visits would lead them to look around our manufactories and examine our wares and products; and I may here say that an experience of over twenty years in the export trade from the United States to these countries has taught me that one intelligent foreign merchant coming to us is worth to our business community more than twenty American drummers sent to his. One of the great curses of our foreign commerce has been the irrepressible and irresponsible American drummer, who went abroad at the expense of a number of our manufacturers to have a good time, and who promised every thing but did little or nothing.

As a whole, a more thoroughly incompetent set of men than those our manufacturers have chosen to send abroad, especially to South America, to represent them, would be difficult to find, their principal aim having seemed to be, as far as my experience has gone, and I have met a great many of them, to show foreigners how many cocktails they can consume, how well they can make a milk punch, in what a superior manner they can play poker, and how little they knew, not only of the business they were about, but the A B C of a common business education.

(3) We should show these foreign nations that we are capable of doing our own business and of attending to our own affairs financially, and without the aid of our good cousin John Bull; and this is another thing they have had good reason to doubt, as heretofore, whenever we have bought any thing from them we have been obliged to send them a letter of credit from some of our London bankers, and whenever they wanted to buy any thing from us they have been obliged to send us a similar document.

(4) We should divert into our own pockets the millions of dollars which we annually pay foreign vessels for carrying our goods, to say nothing of the few millions which we annually pay to the London banker for kindly aiding us to do our foreign business. Perhaps many of you are not aware that on every thing we import and export we pay these kind gentlemen in London a commission varying from one-half of 1 per cent. to 2 per cent., and when you take into consideration the total amount of exports and imports of this country, this is no small sum, to say nothing of the amount of freight which we pay to foreign vessels.

(5) By negotiating reciprocity treaties with the various countries of South and Central America, we should increase our business with them, and while so doing at the same time gradually reduce our revenue, and thus decrease our surplus without the necessity of any radical free trade measures. The absurdity of the free trade mania and the advantage of reciprocity, or, if I may so call it, fair trade, between nations, can be easily illustrated. Take for instance, our trade with Brazil; we admit their coffee, which is their principal product, free of duty, while they collect an export duty on every pound we consume. Now, I venture to assert it as a fact, that if we notified Brazil that unless she agreed to admit our lumber, flour, petroleum, and manufactured goods free of duty, or at all events materially reduce the present duties and remove the export duty from coffee, that we should put a duty on her coffee, she would do so at once.

Take, again, the Argentine Republic. If we should propose to this Government to admit their wool free of duty in exchange for their admitting our principal products and manufactures free, or at greatly reduced rates, it would be accepted beyond a question. And so with the various other governments. In this way we could get what raw material we required free, and have a good market for the goods produced from this raw material which we could not consume ourselves.

But there is one thing we must do if we want New York, the great metropolis of this land of 60,000,000 to become, as she should become, the business center of the world. We must do away with the antediluvian laws which require that a merchant should pay a penalty for keeping goods in store in New York or any other port in the United States beyond one year, and which also require, when he enters these goods for consumption, he should pay on the weight of the goods as weighed at the time of their arrival, without any allowance for damage or shrinkage. This is alone sufficient to divert any amount of business from us and place it in European ports, where they are far more liberal. Do away with these absurd old laws made by our forefathers in 1790, and New York will become the distributing point for all the products of this hemisphere. This will give cargoes to our steam-ship lines, business to our merchants and store-houses, and employment to our laborers.

And now let us look into the question as to what all this that I have suggested would cost us. On a rough estimate, to cover all the different business centers in South and Central America, both on the east and west coast, with steam-ship lines such as I have suggested, would require a company or companies with a capital aggregating about \$40,000,000. It is perfectly safe to assume that these lines would at least pay their way; therefore, the amount which as a maximum the Government

would have to pay would not exceed \$4,000,000 per annum. The guaranty to the bank, which it is natural to suppose, owing to the difficulty of establishing agencies and re-arranging the rates of exchange between all these countries, might not make any money for the first two or three years, might amount at the outside to \$3,000,000 per annum. Total cost to the Government of the United States, and therefore to the people, \$7,000,000 per annum for say ten years. What is this expenditure compared to the benefits that would be derived, assuming our population to-day to be 60,000,000, or say less than 12 cents per capita per annum?

Supposing my theories—I will hardly admit that they are theories—to be correct, what would be the effect on the country? Our laborers would all be employed and well paid for their labor. This means happiness and contentment to the people. Our looms would be running on full time; our factories of all kinds would be fully employed; our ship-yards would be increased to such an extent that we would again assume the proud position that we held years ago, and the American flag would proudly wave in every port of the globe. Our people would be happy; socialism and strikes would be unknown, and the American eagle would spread his protecting wings over the smaller republics on this great continent, and we would be recognized the world over as having assumed a position that should long ago have been ours—of the greatest nation on the earth. Let us, as good business men and good Republicans, endeavor to bring about these results, and then let us have a parade to celebrate the event greater than the one that we claim elected Harrison and Morton, and the Business Men's Republican Association of the city of New York will be written down in history as the greatest benefactor this country has ever known.

Total amount of exports and imports of merchandise of the United States during the last fiscal year.

Exports	\$695,954,507
Imports	723,957,114

Total amount of exports of gold and silver for the year ending June 30, 1888.

Exports	\$46,414,183
Imports	59,337,986

A statement showing the value of the foreign commerce—imports and exports of merchandise and specie—of Central America, the West Indies, and South America.

Countries.	Year.	Imports.	Exports.	Total imports and exports.
CENTRAL AMERICA.				
Guatemala.....	1886	\$3,537,000	\$6,736,000	\$10,273,000
Costa Rica.....	1885	3,661,000	3,297,000	6,958,000
Honduras.....	1884	1,500,000	1,600,000	3,100,000
Nicaragua.....	1885	2,800,000	2,443,000	5,243,000
San Salvador.....	1884	2,646,628	6,065,799	8,712,427
British Honduras.....	1885	1,240,257	1,188,789	2,429,046
Total Central America		15,384,885	21,330,588	36,715,473
West Indies	1885	110,202,756	124,109,990	234,312,746
SOUTH AMERICA.				
Guiana, French.....	1885	3,763,500	3,474,000	7,237,500
Guiana, Dutch*.....				
Guiana, British.....	1885	7,141,015	8,763,705	15,904,720
Venezuela.....	1886	9,103,478	15,884,728	24,988,206
United States of Colombia.....	1886	14,000,000	8,000,000	22,000,000
Ecuador.....	1886	(†)	8,014,409	8,014,409
Peru.....	1884	11,064,744	7,958,625	19,023,369
Bolivia.....	1885	6,150,000	10,463,845	16,613,845
Chili.....	1885	40,096,000	51,259,000	91,355,000
Argentine Republic.....	1886	97,658,000	69,834,000	167,492,000
Uruguay.....	1886	20,195,000	23,812,000	44,007,000
Paraguay.....	1886	1,621,000	1,571,000	3,192,000
Brazil.....	1886	107,835,819	106,449,044	214,284,863
Falk-Isles.....	1885	235,120	476,168	711,288
Total South America		318,863,676	315,900,524	634,824,200

* Data not obtainable.

† Not obtainable.

Trade in domestic merchandise between the United States and Central and South America, year ending June 30, 1888.

Countries.	Imports.	Exports.
South America:		
Argentine Republic.....	\$5,902,159	\$6,099,411
Bolivia.....	(*)	21,893
Brazil.....	53,710,234	7,063,892
Chili.....	2,894,520	2,423,303
Ecuador.....	1,118,627	810,567
Guiana:		
British.....	2,822,382	1,651,711
French.....	12,424	140,086
Dutch.....	430,983	264,096
Peru.....	309,040	865,160
United States of Colombia.....	4,393,258	4,923,259
Uruguay.....	2,711,521	1,337,430
Venezuela.....	10,051,250	3,008,336
Central America:		
Costa Rica.....	1,608,979	1,064,549
Guatemala.....	2,085,467	887,771
Honduras.....	959,331	672,796
Nicaragua.....	1,496,171	861,156
San Salvador.....	1,473,430	645,302
The West Indies.....	71,565,666	26,968,636

* No data.

The latest obtainable data of the imports and exports of domestic merchandise of the United Kingdom, France, Germany, Spain, Italy, Belgium, and Holland to and from the Central American states and South America.

Countries.	Imports from—	Exports to—	Countries.	Imports from—	Exports to—
THE UNITED KINGDOM.*			Peru.....	\$1,408,484	\$293,936
United States of Colombia.....	\$1,436,036	\$4,572,120	Spanish West Indies.....	866,796	292,264
Venezuela.....	705,044	2,194,237	Central America.....	(†)	(†)
Brazil.....	16,843,613	29,536,876	SPAIN.		
Argentine Republic.....	8,011,894	25,259,942	United States of Colombia.....	64,993	211,247
Uruguay.....	2,015,719	6,104,869	Venezuela.....	707,016	148,267
Chili.....	11,083,147	7,829,882	Brazil.....	176,369	97,513
Peru.....	8,103,311	4,204,933	Argentine Republic.....	1,980,939	3,455,051
Central America.....	5,436,085	3,306,648	Uruguay.....	648,891	2,422,312
Spanish West Indies.....	656,661	8,467,919	Chili.....	28,382	1,526
FRANCE.			Peru.....	147,425	15,250
United States of Colombia.....	3,491,071	4,205,552	Spanish West Indies.....	9,473,533	13,610,573
Venezuela.....	3,500,421	678,441	Central America.....	8,914	17,136
Brazil.....	19,717,384	10,566,502	BELGIUM.		
Argentine Republic.....	38,392,784	18,487,487	Brazil.....	5,007,578	2,744,469
Uruguay.....	7,502,214	3,395,907	Uruguay.....	4,895,831	(†)
Chili.....	2,338,071	2,316,008	Argentine Republic.....	10,637,002	2,110,262
Peru.....	4,155,708	1,399,492	Chili and Peru.....	2,214,482	558,928
Spanish West Indies.....	2,608,183	872,123	ITALY.		
Central America.....	936,896	120,421	Central and South America.....	4,593,014	5,825,126
GERMANY.			HOLLAND.		
United States of Colombia.....	(†)	(†)	Peru and Bolivia.....	2,596,066	804
Venezuela.....	(†)	(†)			
Brazil.....	928,914	3,147,312			
Argentine Republic.....	11,256,448	3,060,442			
Uruguay.....	(†)	(†)			
Chili.....	2,634,898	793,368			

* Statistics for the United Kingdom are for the year 1886, and the remaining countries for the year 1885.

† No data.

When we compare the values of the foreign commerce of the leading commercial nations of the world, we find that the United Kingdom stands first, Germany second, France third, and the United States fourth in the value of foreign commerce. The value of our import and export trade in merchandise reached its highest point in 1881, when it amounted to \$1,545,000,000; it declined to \$1,314,900,000, but has increased to \$1,419,911,621 in 1888.—(*Government Report.*)

APPENDIX D.

STATEMENT OF MR. WILLIAM A. SCHREIBER, OF NEW ORLEANS.

MR. SCHREIBER. I was called very suddenly to Washington to have the pleasure of meeting you, and I left without being at all aware of the nature or purpose or scope of your investigation. Therefore I am entirely unprepared to address you at length, and indeed I do not know that any remarks that I may possibly make would be within the scope of your inquiry.

My thought had been running upon this line; that the purpose of your investigation was to seek some means of increasing the commercial relations between the United States and the countries south of it through the Gulf ports. If that is your purpose I may have something to say. If it is simply postal communication, I have nothing at all to say, because I am not familiar with that subject. I assume that if the commercial relations between the two parts of the continent have not been wider than they have, the fact arises from no unwillingness to trade. I think that both sides are anxious to trade with each other. If the trade has been restricted it is owing to causes which will be investigated in due time and I hope remedied.

In the present condition of the commerce between Central and South America and the United States, if the question arises as to which is the Gulf port best suited as the point at which the products of the two countries will be exchanged, I suggest that a glance at the map will show at once that that point is New Orleans, being on the direct line of communication with the countries south of us and the valley of the Mississippi. New Orleans is the outlet of six lines of railroads, and has 20,000 miles of river navigation penetrating to the heart of the country, and extending to the sections of the United States that receive most of the imports we get from these countries.

New Orleans is by far the largest importing port in the South. Its imports during the last fiscal year amounted to \$15,400,000. Of that, \$10,400,000 was composed of five articles, all of which came from Central or South America—that is, coffee, sugar, fruit, hemp, and India rubber. I have the figures with me, taken from the last reports of our custom-house. We have the proper connections already established. I think we have fourteen steamers running between New Orleans and the various ports of Guatemala, Nicaragua, Costa Rica, and Honduras. We have lines of steamers connecting with Mexico and a line to Havana. They bring \$950,000 yearly, in round numbers, of imports. Our imports are composed of fruit coming from Costa Rica, Honduras, and Nicaragua. With a little encouragement I believe a regular line would be put on between New Orleans and Colombia. An attempt was made in that direction some few years ago, with which I was connected. It was started with insufficient means and had to be given up, but the little experiment showed that with the least encouragement an enormous traffic could be built up between Cartagena and New Orleans. We have evidence of that by correspondence from that country, and I believe the same would apply to Venezuela.

A fast steam-ship line, such as Mr. Thompson has described, would not require 16 knots an hour. A line making 14 or 15 knots an hour, running between New Orleans and Cartagena, having a tender running east from Cartagena—or two tenders—would help the traffic very materially.

MR. CALDERON. What articles do you bring from those countries?

MR. SCHREIBER. Principally coffee. We are the outport of St. Louis, which is the largest interior coffee market in the world. We also import a great deal of cabinet-woods, dye-woods, and fruits from those countries. Cartagena is a little too far for fruit. Any service between that port and New Orleans would have to be a separate one.

MR. GUZMAN. Do you know anything about the distance between New Orleans and those South American ports?

MR. SCHREIBER. I could not tell you exactly, but New Orleans is certainly the nearest port that you could come to. It is on a direct line, as you see by the map.

MR. GUZMAN. Let us say that it is 1,400 miles from New Orleans to Port Limon; in how many days would you make that?

MR. SCHREIBER. It depends upon the speed.

MR. GUZMAN. Well, at 350 miles a day?

MR. SCHREIBER. Four and one-half days.

MR. GUZMAN. That would bring us within six or seven days from New York to Greytown?

MR. SCHREIBER. Very easily, with a good class of boats.

THE CHAIRMAN. With first-class boats it certainly should not take more than five days. It is about 2,026 miles from New York to Port Limon.

MR. GUZMAN. I am sure that from New York to Greytown it is not more than 2,000 miles. A steamer ought to run that distance in six days at the most.

Mr. SCHREIBER. I do not think that you will find the distance from New Orleans to Greytown more than 1,200 miles. A good steamer ought to run from New Orleans to Greytown in three days.

Mr. GUZMAN. Do you know the distance between this city and Chicago by rail, or the distance from New York to Chicago? I know it requires about twenty-four hours to make the run.

Mr. SCHREIBER. The distance is about 912 miles. I would suggest that there has been a revolution in the method of transportation of late years. The question now is no longer how much it will take to bring a pound of freight from one point to another point, but how much it will take to carry that pound of freight from its point of production to its point of consumption. Therefore, the question which presents itself to us here, taking Cartagena, the port for coffee, is not what it will cost from Nicaragua to Tampa or Mobile, but how much it will cost to take that pound of coffee from the point of original shipment to St. Louis or Chicago. If that is the question, New Orleans is undoubtedly the cheapest point; it is the nearest.

The CHAIRMAN. This is a question that can not be taken absolutely. What would be the advantage of one of those countries sending all its coffee to New Orleans? New Orleans is a very small market.

Mr. SCHREIBER. Yes, but the West is the consumer of the coffee.

The CHAIRMAN. But transportation by rail is not as cheap as transportation by ship.

Mr. SCHREIBER. As I said, the great consumer of coffee is the West. I believe 70 per cent. of our coffee is consumed in the West, and probably 60 per cent. of that amount is consumed in a section of country west of a straight line drawn from Chicago to New Orleans, taking Chicago as the central distributing point for the Northwest. The distance from Chicago to New York, as has been said here, is 912 miles. It is 914 miles to New Orleans. As you move west from that line you go farther from New York, but not farther west from New Orleans. The central distributing point of coffee and tropical products is west of the Mississippi, at a point which is as far from Chicago as New Orleans. Kansas City is 100 miles nearer New Orleans than Chicago. The traffic which has been established between New Orleans and Central America indicates pretty well what the line of traffic should be.

Mr. CALDERON. What do you suggest in order to increase the traffic and communication between New Orleans and the countries you refer to?

Mr. SCHREIBER. If the traffic is to be carried on by us there will have to be some compensation offered by the Government to induce people to put on American ships, which are much more expensive to keep up and to run than British or other foreign ships. With the slightest encouragement and the slightest assistance I have no doubt that New Orleans will put on a line itself.

Mr. CALDERON. Do you think the export trade would be increased by a line from New Orleans?

Mr. SCHREIBER. I have no doubt it would.

Mr. CALDERON. Do you think New Orleans could compete with New York in that line?

Mr. SCHREIBER. New Orleans could undersell New York in several articles; that is, New Orleans could place those articles in South America cheaper than New York could.

Mr. CALDERON. What are your principal exports to South America?

Mr. SCHREIBER. Machinery, flour, salt meats, hay, and things of that sort.

Mr. CALDERON. And furniture, I suppose?

Mr. SCHREIBER. And furniture.

Mr. HANSON. You say that American ships are a great deal more expensive to buy and operate than British ships, or other foreign ships. We understand that is because it costs more for building the ships, and also because it costs more to run them on account of the higher wages?

Mr. SCHREIBER. Wages are better, and the American seamen expect to be better treated and better fed than foreign sailors.

Mr. HANSON. The Government forces a system upon these people, who are compelled to pay more money and therefore should have assistance; that is, the Government should extend the principle of protection to this business as it does to the manufacturers?

Mr. SCHREIBER. That is the only sort of protection and the only form of protection that I advocate, because it comes back to us in the shape of increased trade. The protection we give to foster manufactures is a dead loss.

Mr. HANSON. I differ with you on that. Another thing, we are not here to argue that.

Mr. SCHREIBER. I say that the protection we pay in the encouragement of steam-ship lines would bring back to us more than the tax that we are called upon to pay.

Mr. HANSON. The fact is that this trade with foreign countries has come to be a question of Government competition rather than private competition?

Mr. SCHREIBER. Yes, sir.

Mr. HANSON. Germany, England, France, and Italy are all paying great sums in subsidy for steam-ship lines to an extent that would pay the interest on half of our national debt.

Mr. SCHREIBER. I know of one company that gets \$1,000,000 a year as a subsidy for running a line of steamers between a port in France and a port in the West Indies.

APPENDIX E.

STATEMENT OF S. C. COBB, OF PENSACOLA, FLA.

To the honorable Committee on Communication on the Gulf of Mexico and the Caribbean Sea :

GENTLEMEN: Pensacola, Fla., situated in latitude $30^{\circ} 20' 47''$, longitude $87^{\circ} 18' 32''$, possesses the finest harbor on the North American Continent, its depth of water at the entrance admitting ships drawing 23 feet at low tide, and it has capacity for five thousand ships to ride at anchor at one time.

Pensacola's position will strike the observer as peculiar and, in the light of modern progress, Providential. She has access by the shortest possible lines now constructed, or under contract, to the coal fields of the Appalachian Range. These products can become the basis of freight for numerous steam-ship lines carrying mail and articles of merchandise for exchange with the near-by ports of Tampico, Vera Cruz, Tehuantepec, Truxillo, Greytown, Colon, and the farther ports of the Brazilian and Argentine Republics.

Pensacola will be nearer to all the principal cities east of the Mississippi and west of the north line drawn through Atlanta than any other port of the United States upon the completion of her lines of communication now under contract. She need not make invidious distinction, for the claims of any other must suffer upon investigation. Steamers from this port can obtain here coal for power and cargo at the same time.

Her gateway to the Gulf is only 7 miles from her wharves, while those other ports which might claim consideration are from 35 to 110 miles from the Gulf, and are reached by tortuous and dangerous navigation.

Pensacola has also a large trade in lumber, already existing, with its neighbors, averaging per annum, to the Argentine Republic, 94 cargoes; to Uruguay, 18 cargoes; to Brazil, 8 cargoes, of 500,000 superficial feet to each cargo; and to the Republics of Colombia, Costa Rica, Honduras, and Mexico, such quantities as would add materially to the requirements of a permanent business, and showing a basis for the support of steam navigation not equaled nor approached by any port bordering on the Gulf of Mexico.

These statements are easily verified by the export records at the custom-house, and need no embellishments.

Your attention is called to the fact that we have need of the magnetic iron ores of the Andean Range in order to manufacture steel with economy in Pensacola, there to meet the ores and coal of the Appalachian Range, and the charcoal of Pensacola's vicinity, and under the fostering care of the General Government we shall convert the crude material into shapes for ribs, plates, and all manner of forged material for use in the construction of steam-ships.

We suggest that your committee recommend that, under statutory provision by your respective countries similar to that known as H. R. bill 4663 (with some provisions of Senate bill 1627 added), there may be constructed steamers of 800 to 1,500 tons, to be built under the flag of either country, to receive reciprocal privileges, the same subsidies or bounties, and to be subject to the uses of their respective governments for purposes of defense or naval aid, to be made schools of maritime instruction, as well as aids in commercial development, the purpose being to develop maritime power for the benefit and protection of the "three Americas;" also, to provide for the education of our young men in scientific and mechanical construction.

Pensacola believes she possesses the best location for all mail communication by steam-power in the Gulf, and therefore earnestly desires your personal observation of her facilities, and presents through you her request that the International Congress visit our city and note our advantages.

I present to your honorable body, through the courtesy of Mayor W. D. Chipley, copies of maps showing our relative location.

Most respectfully, yours,

SEWALL C. COBB,
Representing by request the Pensacola Chamber of Commerce.

APPENDIX F.

STATEMENT OF MR. W. B. THOMPSON, OF THE PLANT INVESTMENT COMPANY.

Mr. Chairman and Gentlemen of the Committee: Mr. Plant, whom you kindly invited to attend, appreciates your kindness and regrets that he is unable to be here to-day. Unfortunately, he is sick in bed. He would have esteemed it an honor and a pleasure to have been here to give you his views.

What I may say to you will be of a general nature, based upon my own views and upon views that I have obtained from conversations with him relative to service on the Gulf of Mexico, the Caribbean Sea, and the Pacific Ocean.

In the establishment of fast mail communication between the United States and the countries of Central and South America, it would seem that there should be a division of the service between the different countries, and that this can be done through the medium of the different Postmasters-General.

PROPOSED LINE TO ASPINWALL.

In my opinion, the first thing and the main thing to be done is to establish a line from the United States to Aspinwall. That line should be a weekly service in steamers making not less than 16 knots per hour.

The CHAIRMAN. Allow me to ask where the steamers are to start from?

Mr. THOMPSON. Tampa, Fla. I appear for the Plant Steam-ship Line. We are clear that if there is anything to come of this business (and we are clear also that something should come of it) the United States should take the initiative, and put on that fast line from Tampa to Aspinwall. It should be a weekly service, in ships making, say, 16 knots per hour.

TAMPA.

I believe Tampa, as I said before, to be the best point of departure. I am sure that quicker time can be made from New York and all points in the United States (with some few exceptions) via Tampa, to Aspinwall and all Central America and the west coast of South America than by any other route.

The distance from Tampa to Aspinwall is 202 miles less than from any other accessible Gulf port. I may say in connection here—perhaps it will be a little out of order—that to go into Greytown, Nicaragua, would take the ship 104 miles out of her way. That is a question to be decided by some other authority than the steam-ship company, whether they shall go in there or not.

The CHAIRMAN. You mean that it makes a diversion in the direct line of travel of 104 miles?

Mr. THOMPSON. An additional sail of 104 miles from the direct line. New York is from thirty-six to forty hours from Tampa, Fla., by the fast mail that the Government already has established, passing through Philadelphia, Baltimore, Washington, Richmond, Wilmington, Charleston, Savannah, Jacksonville, to Tampa, and at different points—railroad intersections—it receives mail from the diverging country to the West and takes it through.

The distance from Chicago to Tampa is about the same as that from New York to Tampa, and Cincinnati, Louisville, St. Louis and other great cities of the West can reach Tampa, as quickly as New York. My object in calling your attention to that fact is that we do not presume to say that we can carry heavy freight from New York to Tampa by rail and thence to Aspinwall to compete with steam-ships that run from New York. Those undoubtedly will continue, and should. But for that portion of the country that lies to the west of Tampa and to the west of this line from New York to Tampa, and that can reach Tampa as quickly, or Mobile, Ala., as quickly as it can New York, with its heavy freight, it is an advantage for them to go that way, because they make time.

The United States has taken the initiative step in this matter of fast mail facilities to Spanish America by the provision already made for the West India fast mail. A special train of the Post-Office Department runs on prescribed schedules from New York to Tampa, a distance of 1,315 miles.

The mails of the day of New England and the entire State of New York, Pennsylvania, and the other surrounding States, are gathered up and leave New York at about 5 o'clock a. m., or, speaking more correctly, 4.35 a. m., going through to Tampa in thirty-eight to forty hours. All along, as I said, the accumulated mails from the section west of this line are taken up and carried to Tampa. And it is carried seven days in the week. Three days in the week the cars run on to the docks alongside of the ship and the mail is transferred from the cars to the ship, and *vice versa* when the ships return three days in the week.

These arrangements and facilities provided already by the Post-Office Department of the United States give ample preparation for the concentration of mails for Central America, and the west and north coasts of South America. It is only left for the postal authorities to make similar arrangements with the railroads leading from junction points on this West India fast mail line to connect the great cities of the West—Chicago, St. Louis, Kansas City, Omaha, Indianapolis, St. Paul, Milwaukee, and Cincinnati—with the shortest possible communication to Tampa, where the mails would then be, as I said before, on the direct line north and south to Aspinwall and Central America. Tampa is about due north of Aspinwall. When I speak of arrangements being made, I refer more particularly to faster time upon the railroads, and faster time than ordinary passenger trains make. The time from New York to Tampa is faster than ordinary trains make. It is the fastest train in the south, and one of the fastest in the United States. In the north some make equally as fast time.

PLANT STEAM-SHIP LINE TO HAVANA.

At the present time the Post-Office Department has a tri-weekly service by the Plant Steam-ship Line, from Tampa, via Key West, to Havana, Cuba. During the summer months, from the 1st of May to the 1st of November, this service is semi-weekly. This contract for mail service to a foreign port is under a special statute that permits the Postmaster-General to combine a foreign office and a domestic office in one route when the foreign office is not to exceed 200 miles from the domestic, and the Havana office is just a little over 100—100½ miles—and comes, of course, within 200, and is combined in that one route.

Mr. HANSON. That is the reason why the Post-Office Department is able to make a more liberal contract for that mail. I never understood that before.

Mr. THOMPSON. Yes, sir.

Mr. HANSON. I know they pay the Plant system more money than for all the mails to Spanish America.

Mr. THOMPSON. I want to explain that.

Key West has been a very expensive office to supply to the United States. It was a large town—20,000 or 25,000 people manufacturing cigars, tobacco, etc., and they cost a great deal of money to supply. They just ran down, chopped the line off, and came back. The Department finally (I was myself in the Post-Office Department, the head of the railroad transportation service for many years, and Second Assistant Postmaster-General) got rid of that service and coupled Havana to the inland steam-boat service.

At Key West they were only 100 miles from a city of 250,000; going down there like a big bull-dog, looking at them, and getting scared, and coming back.

Now Key West is better supplied than ever before, and Havana is well pleased.

Mr. HANSON. You have then a domestic contract to Key West?

Mr. THOMPSON. An inland steam-boat service.

Mr. HANSON. Combined?

Mr. THOMPSON. Yes, sir. The only route of the kind in the United States, and before I get through I shall take occasion to say to you that that is the thing the United States should do between Tampa and Aspinwall.

Mr. HANSON. Well, how far is Tampa from Aspinwall?

Mr. THOMPSON. One thousand one hundred and ninety-eight miles. It would require a special statute.

This contract for mail service to a foreign office is under a special statute. Key West is a large town, and for many years has been an expensive one to supply with mails. For the seventeen years ending with 1886, the average annual cost of supplying that office was \$46,914.11. The carriage by this line of our mail to Cuba and Porto Rico is estimated by the Post-Office Department (official figures) to be worth \$24,159.07 per annum, at sea and inland postage rates.

The Post-Office Department, for obvious reasons, desired to couple Havana and Key West in one route, and this it was enabled to do under the special act of Congress, before referred to, passed in 1885. Under the present contract the United States pays \$58,500 per annum for the service I have described. The United States, however, carries the mails both ways, and collects about \$4,500 from the Cuban Government for the mails that it brings to the United States. We act as agents of the United States to collect that money from Cuba and credit it on our contract. As I said, about \$4,500 per annum from Cuba for the mails that it brings to the United States and about \$3,500 for carrying the mails of other countries to Cuba. That leaves \$50,000 for this inland and foreign service, to Key West and Havana. Subtracting from this the cost of the foreign service, \$24,159.07, and we have \$25,840.93 as the cost of supplying Key West under this arrangement, whereas the average annual cost for seventeen years immediately preceding this contract was almost \$47,000.

Mr. HANSON. A great deal cheaper now.

Mr. THOMPSON. Yes, sir. I shall attempt to show you that the same thing can be done between Tampa and Aspinwall.

This line has been continued for more than three years past, notwithstanding the yellow-fever epidemics, which shows that properly built steamers, under proper quarantine regulations, can keep up communication with an infected port and not endanger non-infected ports.

There never has been a case of yellow fever on one of those ships. Not a single one. The quarantine arrangements are perfect. When the ships were built all the suggestions of Dr. Hamilton, of the Marine Hospital Service, were adopted and all the information that Mr. Plant could get. The standing orders are such that any officer or seaman who violates the orders of Dr. Wall, the health officer at Tampa; of Dr. Porter, the health officer of the State of Florida, or of Dr. Burgess, the health officer of the United States Marine Hospital Service at Havana, is subject to discharge, no matter if he is the captain of the ship. Those surgeons or physicians go aboard the ships and make suggestions in regard to cleaning and sanitary arrangements, and if any officer or seaman does not carry them out immediately he is discharged. Again, they have yellow fever, as you know, nearly every summer, although it does not get to be epidemic as it does with us here. A gentleman is in Havana and wants to go to the United States by the Plant Steam-ship Line. The first thing he must buy a ticket of Lawton Brothers, and Lawton Brothers will not sell him a ticket until he brings a clean bill of health from Dr. Burgess, who is the surgeon of the United States Marine Hospital Service located at Havana. He can not get away without that certificate on the Plant ships. When he goes off in the boat to the ship anchored in the bay at the foot of the ladder not only is the purser but the captain, and no man can go up that ladder without a ticket. We never had yellow fever on the ships.

To show you that this thing has been carried out, and to show you that they have had yellow fever there and that the ships kept clear of it, I will say that in May, 1887, yellow fever broke out in Key West, Fla. It was very bad there and continued so until August, when they crushed it out. There was no fever on the ships. Then, the same fall, they had fever at Tampa, but the ships went along the same way. People who went aboard of them had to have a bill of health. No officer or seaman was allowed to go ashore, except perhaps the captain or the purser, who had had the fever; not allowed to go ashore in Havana, nor in Tampa or Key West. In 1888 there was fever at Jacksonville, but there was no fever on the ships, and these mails ran right straight along just as regularly as they did at any other time. When we came down to Waycross, or just above there, an interior point, a locomotive was attached to the mail car and it was taken through to Tampa; over 250 miles, with just enough crew to run the locomotive and mail car, with the mail only in it, and the mail was put aboard the ship. It did not stop at Tampa, but went down to Port Tampa. As you know, that is 10 miles below. And so communication was kept up. I dwell at length on that point to show you that we fully believe that ships can be built and can be so run that they can run to and from an infected port and not infect another port, but the rules must be strict, and they must be carried out without fear or favor.

This line has also established the principle of building ships of high speed, on a light draught, which has been followed by the construction in American ship-yards of other ships of similar design for the commerce of ports not admitting vessels of heavy draught. I will say that the ships of the Plant Steam-ship Line are probably the fastest ships of their draught which carry the American flag to a foreign port. It is no trouble for the *Olivette* to knock off 17 knots hour after hour.

THE CHAIRMAN. What is the draught of those ships?

MR. THOMPSON. Well, about 12 feet. We can lighten them away to 9 if need be. Never want more than 13 feet.

DR. GUZMAN. What is the tonnage?

MR. THOMPSON. The *Olivette* is eleven hundred and odd tons; the *Mascotte* between five and six hundred. They are more particularly for light freight and passengers; of course so, running to Havana. The heavy freight does not go by our line at all. It is light freight.

DR. GUZMAN. They are comfortable for passengers? Very nice?

MR. THOMPSON. Have electric lights and all conveniences.

THE CHAIRMAN. How about the accommodation for carrying bananas?

MR. THOMPSON. Well, they would not be adapted to carrying a large quantity of bananas. The room is sacrificed for passenger business. The *Olivette*, in summer, runs between Boston and Bar Harbor.

DR. GUZMAN. Oh, yes. She is a very fine ship. That is the boat that runs between Tampa and Havana?

MR. THOMPSON. Yes, sir. Runs there all winter, and in summer between Boston and Bar Harbor. These ships were built by Cramp & Sons.

DR. GUZMAN. How long between Tampa and Havana?

MR. THOMPSON. Twenty-five hours under the mail contract. We have no trouble in making it. We have waited for the train and made it in less.

From the 1st of May to the 1st of November we perform only two round trips between Tampa and Havana, and the *Mascotte* does that work. Then one ship makes the two trips. In the winter time it takes two ships to make the three trips. So you see that to do the third trip is not as profitable as two trips.

HARBOR FACILITIES AT TAMPA.

Tampa Bay is large enough to hold the navies of the world, well sheltered and protected from storms. The charts of the United States show a minimum depth on the bars of 22 to 23 feet of water.

(Mr. Thompson here showed the chart to the chairman and pointed out the location of Tampa and Port Tampa.)

We are practically in quarantine down there (Port Tampa). We have a train that takes the laborers to Tampa at night and brings them back in the morning. There is nothing there except the wharves, inns, and a restaurant, at which the laborers get necessary meals. When the ships are in port the crews do not eat on them, but go to this restaurant which is owned by the company, and everything is given up to cleaning and putting them in the best possible sanitary condition. The inns are to accommodate the public. It is necessary to have something of the kind there. The inns and restaurant are owned and controlled by the company. The company owns all the land there and controls everything. They do not let anybody live there. Mr. Plant is building a hotel for the Plant Investment Company at Tampa, which he hoped to have done this winter, a brick hotel, one of the most elegant things in the State, the finest except it may be the Ponce de Leon.

Mr. HANSON. Haven't you lots for sale at Port Tampa?

Mr. THOMPSON. No, sir. We want the town where it is and nothing down there for the fever to feed upon. The railroad was extended down and that was one of the objects in doing it.

Mr. HANSON. A very good idea, too, for it minifies the danger of contagion.

Mr. THOMPSON. We claim that we can go to Aspinwall, or any other port. Only make some regulations at that end by physicians who have will power enough to say it must be so, and they will be carried out by the ships and they can run to any port.

There are two entrances to the bay, one on each side of an island, 2 miles long, that stands at its mouth. Egmont Key is the island, and there is a light-house there. Ships going from New Orleans to Tampa pass in at the north passage; going to Key West and Havana pass out at the south passage. The railroad is extended to the docks at Port Tampa, which is about 10 miles from Tampa, so that a passenger can step from a Pullman car to the ship, and *vice versa*. The docks are out about a mile to deep water. Freight is loaded direct from the cars to the ships, and from the ships to the cars, all of which facilitates rapid transit. Ships leaving the docks at Port Tampa can put on a full head of steam and pull away for their destination without slowing up for any cause whatever, and it is only necessary for ships arriving to shut off steam in time to stop at the docks. Ships come and go over the outer bars under a full head of steam.

OUTLOOK FOR A LINE TO ASPINWALL.

Mr. Plant feels the necessity for a line of steam-ships from Tampa to Aspinwall. He would prefer to have some company establish that line other than himself or his companies.

Mr. HANSON. But he wants the steamers.

Mr. THOMPSON. He wants the steam-ship line there, and if somebody else would establish the line they should have all the terminal facilities needed in the way of dock and railroad improvements, and anything and everything that any reasonable man can ask. He does not want to do it himself, but wants it done. But if it be not done by others, he will establish a line, provided he receives proper or reasonable encouragement. I want to say here, his idea is that it should not be less than weekly—a weekly line. He will have the ships start from Mobile each trip.

The CHAIRMAN. Will you describe the reasonable facilities that he mentions, or does he only say that in a general way?

Mr. THOMPSON. Only in a general way.

The CHAIRMAN. We should like to have something definite in relation to the line, the establishment of which is recommended by you.

Mr. HANSON. What means of creating that line—what assistance will be required?

Mr. THOMPSON. I will just make a memorandum of that and come back to it, if you please.

At Mobile take on such freight and passengers as there were to go.

Mobile is a very central point and has direct line of communication over the Mobile and Ohio at Columbus, Ky., and St. Louis, Mo. Then it also has the Louisville and Nashville, direct line to New Orleans, and also to Birmingham, Chattanooga, Atlanta,

Macon, and all the country toward the north, so that it is a good place for Western heavy freight. Then the ships would run from there to Tampa. At Tampa they would take on the mails, passengers, and freight, which could be much later than they could get aboard at Mobile. Look at the map—

Mr. HANSON. What is the distance, Mr. Thompson, from Mobile to Tampa?

Mr. THOMPSON. About 300 miles. It takes us a little out of our way. Have to make south to get to Aspinwall and make a little bit east, and run down the perpendicular and base of the triangle instead of running straight, but the intention is to have ships enough so that the time really will be between Tampa and Aspinwall. Each trip the ship will go to Mobile. Mr. Plant already has a line—a weekly line now—between Tampa and Mobile. That will take that up.

Mr. HANSON. What do you think of the policy of having station-ships on the Gulf, on this side and the other side; ships to concentrate the freight and mails at central points, and then make connection across by one main line?

Mr. THOMPSON. I shall say further along.

Mr. HANSON. Then the ship should pull away directly for Aspinwall?

Mr. THOMPSON. To establish lines between all the ports would require too many lines.

Mr. HANSON. The idea is to get quick communication without having so many lines of steamers.

Mr. THOMPSON. Yes. And I would say further, that on the return trip the ship would go to Tampa and put off the mails, so that they could be sent on to their destination by rail. Such passengers as desired to leave the ship at Tampa could do so. If any desired to continue on to Mobile, which would then take another day, they could do that. Then the freight would be discharged at Mobile.

The time by rail from New York to Tampa is from thirty-six to forty hours, and the ships of the Plant Steam-ship Line can make the time from Tampa to Aspinwall in less than four days, which will make the time from New York to Aspinwall about five and a half days, or a little less. Four days from Tampa to Aspinwall is a reasonable time to make. It can be made less than that.

Mr. HANSON. Six days, then, from Aspinwall to New York is a reasonable run?

Mr. THOMPSON. Don't want more than five and a half. As we control the railroad, the ships never go away until the train comes, and the trains do not go away until the ships come, and the same rule would apply to Aspinwall. The train would run to and from the ships.

Four days is a reasonable time from Tampa to Aspinwall and *vice versa*. Regularity is a quantity to be sought as well as speed, and to have the ships perfectly regular, and you know when they are coming as well as you know a railroad train is, is a desirable thing.

Three ships would be required to perform this service with regularity beyond peradventure, and anybody who knows Mr. Plant and knows that he does railroad, express, or steam-ship business, knows that he does it in good square shape. As an illustration. The general manager said early in June, 1887, when the yellow fever was bad at Key West, "Mr. Plant, we are doing no business, and we are running these ships merely to carry the mails. Had not we better throw up and let them fine us?" Mr. Plant said, "No, we agreed to do it, we are able to do it and we will." The ships went on. The general manager was in New York one day and said, "Mr. Plant, something is wrong with the *Mascotte*. We will have to lose a trip." Mr. Plant said, "No, we will not lose a trip. The *Mascotte* will arrive in Havana in time to return as far as Key West. Whatever is the matter she can make across once. We will send the *Margaret* from Tampa to Key West (266 miles) and meet her there. The general manager said, "But there is nobody on the *Margaret* who knows how to run the Northwest Passage." Mr. Plant said, "Here is Captain McKay, of the *Olivette*. Send him down to act as pilot rather than let the trip go." Captain McKay went. That is the way he performs service. I simply tell you this to show that if he starts out do anything he wants to do it well regardless of expense.

The CHAIRMAN. We would like to see Mr. Plant.

Mr. THOMPSON. Mr. Plant will avail himself of the earliest opportunity to see you. As soon as he is able he will go South, expecting to stop here and see you, but if he can not he will see you when you are South. He certainly hopes and expects that you will be at Tampa.

COMPENSATION FOR CARRYING THE MAILS.

In regard to compensation I am unable to state in detail what Mr. Plant's idea would be. I will, however, state my own, which I am inclined to believe he would indorse. The appropriation for the inland steam-boat service, which supplies the domestic service on the inland waters of the United States, is made in a lump sum. The Postmaster-General expends that money in his discretion, and is only controlled by the amount of the appropriation, and he must exercise his own judgment for an efficient service on each particular route. He advertises for such service as is, in his

opinion, most desirable, and accepts the lowest bidder, provided the amount meets his approval. It would seem that the Postmaster-General should be able to exercise the same wise discretion in the foreign service that he does in the domestic, and that the service from Tampa to Aspinwall should be advertised to be performed on schedules named by the Postmaster-General in American-built ships, flying the American flag, making, say, not less than 16 nautical miles per hour, and awarded to the lowest bidder; we think the United States should do that thing, the initiatory measure; the same as is done with the inland steam-boat service, and if, in the opinion of the Postmaster-General, the bid is exorbitant, he would reject it and readvertise the service, as he does in the domestic service, or take some other means of supplying the service that otherwise would have been supplied in that way. We believe that he would be perfectly safe in advertising for the expenditure of \$1,000,000 in foreign service, if he is in the domestic service. But the competition in bidding would be greater than in the inland steam-boat service, and I have no doubt that the service would go at a reasonable price, as it does in the inland steam-boat service, and that the amount of money that the Post-Office Department of the United States would collect of other governments for bringing their mails to the United States, and those for foreign countries to be forwarded, would be sufficient to materially reduce the expense of that service, as has been demonstrated in the Cuban service, and will prove highly satisfactory in a mail point of view, as well as in establishing trade relations between the United States and those countries.

ASPINWALL CONNECTIONS.

We have now gotten the mails to Aspinwall. At Aspinwall, of course, arrangements would be made by the United States of Colombia for a connection to the Pacific and by the various governments of the west coast of Central and South America with their steam-ship lines for the distribution of this mail north and south from Panama. In this schedule no provision is made for the mails of Nicaragua or Costa Rica other than the direct service to Aspinwall. Undoubtedly it will occur to the various governments to participate and forward this important mail through arrangements to be made north and east from Aspinwall. If need be the ships of the line between Tampa and Aspinwall could stop, going and coming, in Nicaragua to accommodate the commerce and mails of that state, but it will be seen by the map that this landing would very considerably delay the mails between the United States and other states of Central and South America.

Dr. GUZMAN. Then Port Limon would be placed in the same position. From Greytown to Port Limon is five or six hours' sail by slow steamers. I do not think that it would take more than five or six hours. It is a very short distance.

Mr. THOMPSON. On the arrival of the ships at Aspinwall they should make connection with light-draught ships running north to ports in Central America and others running east, as far as practicable, to ports on the northern coast of South America. The schedules should be so arranged that the ships will make close connections with the railroad from Aspinwall to Panama, there to connect with steam-ships for the western coast of South America as far south as Valparaiso, and others for the western coast of Central America. In this way quicker time can be made from New York and all points in the United States to the countries named than by any other route, and it would open up a line of communication shorter and more frequent than was enjoyed before, which would undoubtedly bring a reciprocal trade.

As I said before, if we are to stop at Greytown—I think that is the best point—it would simply take us 155 miles out of our course and give an additional sail of that distance going and coming, to accommodate the commerce and mails of Nicaragua. Of course we would not want to say that we would go in and make that sail or not. If you wanted us to, of course we would have to have extra time to run that 155 miles.

Regarding what I said, Mr. Hanson, about taking up the subject of the assistance that we would require, I said I would come back to it. My idea is, and I think Mr. Plant would approve it, to put the service up and sell it to the lowest bidder, and so far as competition is concerned, while it might go for more the first time than afterwards, as soon as a good business developed there would be plenty of money invested in ships and we would have all the competition we want, and they would be glad to get to the service. Our interest is to have the ship line to connect with the railroads.

Mr. HANSON. Mr. Plant is interested in railroads rather than steam-ships.

Mr. THOMPSON. The ships are simply an auxiliary to the railroads.

A member asked how far east on the north coast of South America we could go and make time.

Mr. THOMPSON. We are not prepared to say about that. Probably you gentlemen know better than we do.

We believe that mails from New York and the interior, concentrated at Tampa and running down across from there via Aspinwall can make quicker time to Valparaiso than any other way.

Dr. GUZMAN. There is one objection. Central America is trying to improve its communication on the Atlantic. We do not expect to get our mails always by the Pacific Ocean. The people in my country, Nicaragua, used to get mails at Greytown, before the Greytown harbor was destroyed, in six days from New York. The old steamers ran constantly in six days from New York. This mail, as you suppose, going to Aspinwall and then to Greytown would never be there in less than ten days, perhaps more. To subscribe to that on the part of Nicaragua would be to condemn herself to have mails by the Pacific route, which makes the mail from Washington to the capital of Nicaragua two weeks. But we can go up from Greytown, as we have already done with mail from New Orleans, and directly from Greytown to New York. I have received letters by way of Bluefields to the capital city in seven or eight days.

Mr. THOMPSON. As I said before, it is for some other people than ourselves to decide. If they say for us to go in to Greytown, all we ask is time to make the additional distance.

Dr. GUZMAN. I believe this committee is on communication between the countries bordering on the Gulf and Caribbean Sea. These countries are Mexico, which will not be benefited by the arrangement. The United States will of course. Then Guatemala, whose mails are going now and will go in future certainly over the Atlantic. Honduras is doing the same. Nicaragua will do the same. Costa Rica has already done it. There remains only Colombia and the United States to be benefited by the arrangement, and those countries on the Pacific Coast.

Mr. THOMPSON. In regard to that, we can go into those ports. It only takes more time. If you wanted us to go into those ports we would be ready to go in there—to any of the ports that you may see fit—it only takes time.

Mr. HANSON. Your idea is to start from Tampa, call at Greytown, and then to Aspinwall.

Mr. THOMPSON. To go straight away to Aspinwall, or to go straight to Greytown. We do not want to decide that question. We will be glad to go into Greytown. All we want is time enough to make the additional sail.

Mr. HANSON. Which is the more convenient, calling at Greytown going or returning?

Mr. THOMPSON. We would rather go into Greytown on the return trip. We are willing to stop both ways at Greytown, or pull away to Aspinwall as fast as we can and stop at Greytown on the return trip, or at other points in there.

Dr. GUZMAN. At the present time that line would be very beneficial to us, but we would consider it a temporary affair and would do away with it in the near future.

Mr. THOMPSON. Now, doctor, supposing that we were running a line from Tampa to Aspinwall and went straight from Tampa to Aspinwall, discharged our freight, passengers, and mail—would not expect to stop any longer than necessary to comply with the contract—and stopping on the back track at Greytown, Port Limon, and two or three more places after we got in shore. That would give you service one way. Would that be satisfactory?

Dr. GUZMAN. I could not answer that very well. How would the mails go—the Nicaraguan and Costa Rican—how would they go? From Tampa to Aspinwall and then back?

Mr. THOMPSON. I ask if it would be satisfactory for us to run from Tampa to Aspinwall and then go from—

Dr. GUZMAN. And leave the mails on the return trip?

Mr. THOMPSON. Yes, sir.

The chairman here called attention to the map.

Mr. THOMPSON. We have no objection to going into Port Limon after going into Greytown. If you will give us time we will have the steamer come in there. Just swing around west of the Island of Cuba and come in here. It takes more time, that is all, but you can get the service in there. It is for you gentlemen to decide; we are ready to do it. We are ready to go into Port Limon and Greytown. We want somebody to decide for us whether we shall or shall not pull away straight for Aspinwall. We leave that to you. (Mr. Thompson here showed the Plant system map to the chairman.) Just pass around west of the Island of Cuba and come in there, 104 miles out of our way, if it be decided to serve Greytown and Port Limon—both as well as one, when once in shore.

MEXICO.

So far as Mexico is concerned, the communication between it and the United States is, as is well known, by rail, and to what extent the commerce of the west coast of that country would require mail facilities with the United States via Panama is best known by the gentlemen of the committee. We do not know about that. It is believed that railroads are being constructed that will in a short time make rail communication between the interior of Mexico and the principal cities on its Pacific Coast.

THE PLANT LINE TO HONDURAS.

The Plant system at the present time, has a semi-monthly line from Tampa to Punta Cortez, Honduras. This line is experimental for the winter season, and at the present time is carrying mostly fruit. If some other business shall develop and it proves that the line can be made to pay, it will undoubtedly be continued.

Steamers are already running between New Orleans and Honduras, which, if properly compensated, would doubtless render very efficient mail service between the ports of that state and the city of New Orleans.

I have some statistics that I am unable to hand you to-day, but will take pleasure in doing so without unnecessary delay.

CONCLUSION.

Mr. Plant thoroughly believes that it is the duty of the United States, and for the benefit of each and every part thereof, to foster and encourage regular steam-ship lines with foreign nations, and especially with our neighbors on the south.

I have attempted to show you that the United States already has a fast mail line a long way toward Aspinwall, from New York to Tampa, with connections that would take in all the country to the west. Now it is only necessary to complete this fast line to Aspinwall to put in 1,193 miles of mail service between Tampa and Aspinwall. If you desire to put in more and go into Greytown and Port Limon, with 104 miles more, all that is necessary is time to make the extra distance.

Gentlemen, I thank you for your attention.

Dr. GUZMAN. We thank you very much for the information that you have given us. It is very valuable.

(Mr. Schreiber began his statement).

Mr. HANSON. I would like to ask Mr. Thompson a question before Mr. Schreiber proceeds with his statement.

If I understand you, the steam-ship service between Tampa and Havana is not adapted to the development of trade to any large extent, further than in the carrying of fast mails. The great benefit that we derive from that line, to put it in other words, is fast mail service, but it does not assist us in the carrying on of heavy trade.

Mr. THOMPSON. It does not carry the sugar from Havana.

Mr. HANSON. Now, this service that you suggest for ports farther south, will that service meet the purposes of general trade, heavy freight as well as light, in addition to carrying the mails quickly?

Mr. THOMPSON. It will carry the mails quickly, carry passengers and carry all the heavy freight from that portion of the United States that can reach Tampa or Mobile as quickly as it can reach New York. Exactly this is the case with the present service to Havana. Any freight from any portion of the United States that is going to the Island of Cuba, that can reach Tampa or Mobile (as we have a line from Mobile now that connects with it) as cheaply as it can reach New York, goes that way.

Mr. HANSON. As I understand you, the country for which you do not carry heavy freight belongs to New York. You can carry heavy freight that can reach Tampa as well as New York.

Mr. THOMPSON. For the Southern and Western States we are prepared to carry all there is, and all that is offered will be carried. Room has been sacrificed to passengers because the people had got into the custom, even in your State, of sending their stuff to New York if they wanted it sent to Cuba. We hope to overcome that habit in time.

Mr. THOMPSON [Later]. In case Mr. Plant should have the contract for this service that I have described, from Tampa to Aspinwall, it would be necessary for him to build some new ships, and they would be fine ones and adapted to the trade.

The chart or diagram that I present herewith will explain the situation more fully and forcibly than I can.

Should Mr. Plant establish a steam-ship line between Tampa and Aspinwall, he would, in addition to Tampa, practically have termini at Mobile, Key West, and Havana—which, for convenience, I will designate as Plant ports—and it will be seen that these cover all of the East Gulf ports and the North Gulf ports east of the Mississippi River, except New Orleans, which is more distant from the great cities of the United States than the Plant ports.

The Plant system already has a tri weekly line to Key West and Havana, which would give communication with these ports, for mails, passengers, and freight.

The ship from Aspinwall would touch at Tampa, go to Mobile and return from Mobile to Tampa, from which port it would sail to Aspinwall.

It will be seen that this would form a semicircle and accommodate an immense territory. Tampa is 202 miles nearer Aspinwall than any other accessible port of the United States, and with Mobile as a port of arrival and departure the Tampa line would accommodate more people than any port on the Gulf of Mexico.

You will see on this chart the cities of Charleston, Knoxville, Cincinnati, and Chicago. These cities and the entire territory west of an imaginary line drawn through them, are nearer one of the Plant ports of arrival and departure than they are to New York. Freight from all this territory can be carried to Central and South America, via the Plant ports, cheaper than by New York, besides, the time would be less; the cars run onto the docks, both at Tampa and at Mobile, so that freight can be loaded from the cars to the ships, and *vice versa*, and consequently handled far cheaper than in New York or New Orleans. Should the Plant line extend its system to Aspinwall, it would give a through bill of lading to any one of the Plant ports, including Havana, or to any interior point in the United States.

Memphis, Springfield, Kansas City, St. Joseph, Omaha, and St. Paul, and all the territory east of an imaginary line drawn through these places, including the great cities of the West and South, are nearer one or more of the Plant ports than New Orleans, and consequently the Plant ports would be more available for mails, passengers, and freight.

I think I am perfectly safe in saying that it is not possible to establish a line from the United States to Aspinwall that will serve so well and so cheaply such a great number of people and vast territory as can be done via the Plant ports.

Kansas City is nearer a Plant port than it is to Galveston, and the last-named place is 324 miles farther from Aspinwall than Tampa.

I said before that I thought it the duty of the United States to establish a weekly mail line to Aspinwall from the most accessible port in the United States, and I hope I have made it clear that Tampa is that port; it being nearer than any other port, and that ships running from Plant ports can perform quicker and better service than ships from any other ports.

I have also said that the mail service should be sold to the lowest bidder, but that would not prevent me from expressing an opinion as to what the United States should pay. I am not, however, at this moment sufficiently informed as to the expense that must necessarily be incurred to make a definite statement of the cost of the service I have described. We are investigating this matter, and hope to be fully informed at an early day, and we will take pleasure in placing the figures before you at our earliest convenience.

I submit the following table of sailing distances in nautical miles:

	Miles.
Aspinwall to—	
Galveston	1,522
Mobile	1,387
New Orleans	1,382
Tampa	1,193
Tampa via Greytown	1,302
Vera Cruz to—	
Tampa	927
New Orleans	799
Galveston	618
Tampa to—	
Mobile	376
Havana	366
Key West	266

The trip from New York to Aspinwall, via Tampa, can be made in from three to four days quicker than it can by the all sail route, and at least one day quicker than via New Orleans, which is much farther, and the latter place being located 110 miles from the Gulf on a river difficult and slow of navigation.

APPENDIX G.

FROM THE CHICAGO BOARD OF TRADE.

CHICAGO, ILL., July 9, 1889.

To the president of the board of directors of the Board of Trade of the city of Chicago:

The special committee appointed by the board of directors to examine into and report the advisability of supporting the memorial by special committee to Congress, submitted by Mr. S. A. Jones, of Tampa, Fla., having in view the establishment of a direct line of transportation from the city of Chicago, via Tampa Harbor, to the Caribbean Sea ports, and also to report on the acceptance of an invitation from the Tampa Board of Trade to visit the harbor of Tampa, Fla., beg leave to report that in concert with a convention of representatives from the different exchanges, whose official action therewith I herewith submit, have carefully and thoroughly investi-

gated the subject presented to them, and are of the opinion that the completion of such a proposed route would result not only in benefit to the entire country, but especially and directly to the commercial advantages of this city, bringing Chicago in direct communication with the entire commerce of the now rapidly developing Southern States and to all the ports of the Caribbean Sea. Your committee would, therefore, recommend that the Board of Trade of the city of Chicago heartily support the memorial of Mr. S. A. Jones to Congress, and would recommend the acceptance of the invitation of the city of Tampa by the appointment of six delegates from the board to visit the said city, and that the board adopting the suggestion of Mr. Jones to invite the president of other exchanges represented to appoint three delegates from each of these to join our delegations, and a representative from the Tribune, Inter-Ocean, Herald, Times, and News to join the delegation, in order that the press may be represented. Your committee further reports that it would be advisable to have the delegation referred to leave Chicago by the 27th instant, that the desirable relations may be perfected for an early opening of the port in time for the bulk of this winter's fruit crop to be forwarded to Chicago and other Western points.

G. MONTAGUE,
Chairman.

Report received, and a committee of six delegates was appointed to visit Tampa before taking final action.

To the president and directors of the Chicago Board of Trade :

Report made by the visiting committee the 10th of September, 1889, adopted and committee discharged.

REPORT.

Your committee, appointed to visit Tampa, Fla., and investigate that port and the advisability of indorsing a memorial to Congress from the board of trade of that city, beg leave to make the following report :

We left Chicago on July 29, 1889, in company with committees from the Produce Exchange, the Lumberman's Exchange, Commercial Association, and representatives of the press of this city. At Jacksonville, Sanford, and other places the committees joined and accompanied us to Tampa.

On our arrival at that place we found a large number of representative men from all parts of the State assembled to meet us. President Ingraham, of the South Florida Railroad, placed at our disposal special trains and a steamer, enabling us to inspect the bay from its head to the Gulf of Mexico. We find at the entrance of this bay 24 feet at the north channel and 26 feet at the south channel at low-tide water. About 2 miles from the dock we find a stone bar that had 16 feet of water when the United States Government commenced to remove the same, this being done by an appropriation voted by Congress after they had received the memorial signed by this board of trade and others. The appropriation was \$45,000, and when the work is finished vessels will have 24 feet of water at any point in the channel to the docks. The bay is 40 miles long and 15 to 20 miles wide, and is safe to navigators without pilot or previous knowledge.

Docks and hotels have been built, and other accommodations for freight and passengers ; a line of steamers was put on three years ago, the Key West and Havana. Prior to this there were but small imports ; the receipts of the custom-house were but a few hundred dollars per year. This year the receipts will run over \$300,000. The committees of the numerous boards of trade whom we met in Florida and Georgia, having full knowledge of this, and the possibilities and the business through this, the most natural channel and nearest market from the South American Republics, recognize Tampa as the most accessible and desirable port, and are anxiously looking to see the consummation of this enterprise. They are looking to the Chicago Board of Trade and the great West to aid them.

You may ask in what way do they hope for profit, and what interest has the West and the Chicago Board of Trade in this business ? Our answer for the merchants and producers for Florida and Georgia and the South is :

First. The prospective opening of this business has opened the eyes of railroad managers to the importance of direct lines through the West, giving equal time and as low rates to the East, and your committee has the assurance from the executive officers of three of these lines of railroads in the State named that they not only desire this, but will and can accomplish it, and to aid in developing more active business relations with the West and to handle the South American trade they will carry freight over their lines for five years at actual cost for their services. This will open up a business that will enable the producer to place his fruit in Chicago as cheaply as in New York, saving time and the freight from that city. We find in the State of

Florida nearly 20,000,000 acres assessed for tax, and only three-quarters of a million cultivated. The merchants are active and progressive and these improved transportation facilities to the West will bring them rapid developments, to the producer wealth, and to the railroads dividends for their stockholders. What interest has the West and the Chicago Board of Trade in all this? What benefits one part of the country is a benefit to all. Second. Chicago will have constantly cheap fruits and vegetables, bringing wealth to our merchants and delicacies to our tables at reasonable cost. We find from \$450 to \$500 per car is the cost to ship fruit from California to Chicago; we will be able to receive it from the South at one-third the cost of transportation. Coffee, sugar, sirup, and rice will come to us direct, and with the South and Central American products tropical products will be received at reasonable prices, and in exchange they will take our flour, hay, corn, and potatoes, agricultural implements, furniture, etc.

Your committee finds that the statements made by Mr. S. A. Jones are true in every respect, and that all his estimates have been truthful and not colored to mislead; we also find that the Tampa Board of Trade and the city of Tampa paid all the bills and expense for taking the committees to Tampa and return, and there is not any corporation or individuals back of him to profit by his efforts; also, that the city of Tampa has given over \$60,000 in money and land to manufacturers to locate there, and the enterprise and push found in that city, and also in Jacksonville, and St. Augustine, Macon, Atlanta, Chattanooga, and other cities visited by us, and the enterprise of the press are only equaled by some of our live Western cities.

Your committee finds that the entire South interested in the developments of South and Central American trade, and the aid given them to accomplish the work will tend to more strongly cement our social and business relations. These reasons being true is why the South comes to us, and why our influence and indorsements have potent influence in Washington. Because our State pays over thirty millions to the support of the national Government yearly. Your committee would further recommend that the committee appointed by this board to attend a meeting of a Congress of the Three Americas in Washington, in November, be instructed to use their influence to induce the delegations from South and Central America to return to their homes via Tampa Harbor, where steamers will be placed at their disposal, free of charge, to carry them to Aspinwall, the entry port to their various countries. This will save much, it being only 1,200 miles from Tampa to Aspinwall, and they can make the entire journey from either Chicago, or New York via Tampa to Aspinwall in one hundred and thirty-nine hours, instead of being three or four weeks by the way of New York and Liverpool and the Atlantic sea-board to their homes.

Finally, your committee reports that, having investigated Mr. Jones's figures on the amount of commerce to be gained and the large saving to be made, and after having made both personal inspection and geographical study of the route, harbor, charts, and maps your committee is thoroughly convinced of the practicability of the plans, and that Tampa is the most practicable port by which this trade can be diverted and turned to this country, that will be of untold value to this city and the country at large, and we most heartily recommend the indorsement of the memorial to Congress, presented by Mr. Jones, and that the press of this city be furnished a copy of this report.

GILBERT MONTAGUE,
W. M. GREGG,
JOSEPH GREGG,
GEO. H. SIDWELL,
JAMES B. WANZER,
CHARLES REIFSNEIDER,
Committee.

Joint report from the Board of Trade, Produce Exchange, Lumberman's Exchange, Commercial Association, and Representatives of the Press, of Chicago, Ill., who visited Florida August, 1889.

The convention was called to order at 3.30 o'clock September 13, 1889, in parlor A, of the Grand Pacific Hotel, Chicago, Ill., with Mr. Gilbert Montague, of the Board of Trade, in the chair, who stated that the meeting was called to listen to the report of the committee of the joint committees that visited Tampa, Fla., in August last.

Mr. MONTAGUE. As chairman of the permanent organization of the joint committee that visited Tampa, at the invitation of the Tampa Board of Trade, for the purpose of investigating the practicability of that port as the most desirable and accessible place to open commercial relations with Central and South America, beg leave to propose the following for your consideration, as the report of the joint committee

Colonel LITTLER, of the Produce Exchange, secretary of the meeting, then read the following report:

To the citizens of the State of Florida, Georgia, the Southwest, the Great West, and the city of Chicago :

The gentlemen comprising the committees from the Board of Trade, Produce Exchange, Lumberman's Exchange, Commercial Association, and the press that visited Florida in August, having made their reports, and having been adopted and the committee discharged, we consider the advisability of a more extended joint report, and submit the following for your careful consideration, indorsement, and co-operation.

The object of our visit South was to examine Tampa Harbor, with a view to asking Congress to appropriate necessary funds to establish weekly mail to South and Central America, via Aspinwall, also the development of more active commercial relations with them.

The first question considered is the possibility of that trade and its importance to this country. Statistics show that we have imported this year from the West Indies, Central and South America, Mexico, and Cuba, in excess of our exports to them \$187,000,000 worth of merchandise. These imports have been sent to them mostly in foreign bottoms that have come to us from England, Germany, France, Spain, and Holland, delivering merchandise that should have gone from this country direct. During the month of June there arrived at Buenos Ayres sixty-eight ocean steamers from Europe. We find that the Dutch steam-ship lines running between Amsterdam, the West Indies, and New York imported by this line to us \$14,242,000, and exported \$11,497,000. A portion of our exports to the countries named are now sent via New York and Liverpool. We can furnish most of this merchandise and deliver it from our Chicago manufactories or any central point in this country to Aspinwall, with only one breaking bulk and save from 3,000 to 5,000 miles. Why is it we have not this trade? Because European countries have given aid and encouragement to their merchants to enable them to have constant mail communication and to advertise and introduce what they have to sell. Tampa has asked us to aid them in their efforts to have our Government furnish weekly mail service to Aspinwall. Why this request of us; and what are the advantages of that port over others?

(1) The request is made of Chicago because she is the great distributing point for the West and the Northwest, and is the geographical commercial center of this country.

(2) Because Illinois pays more than any State for the support of the National Government.

(3) Because our western merchants are live, energetic business men, quick to act, always to aid in any enterprise that benefits the country or any section, and because the products of this city can be found in almost any civilized country in the world.

What advantage has the port of Tampa over others? Nature has made Florida the direct highway from this country over which our vessels may pass with comparative safety, and is the nearest and most accessible point to send our mail and merchandise to the West Indies, Central and South America, and Cuba, and returning to distribute the products of the countries from. The Bay of Tampa has many advantages over other Gulf ports.

(1) It is the nearest port where there is sufficient water at low tide to admit vessels to carry on this business.

(2) She has a magnificent harbor, sufficient to accommodate the entire commerce of this country, and has docks, warehouses, and hotels, with ample rail facilities for receiving and distributing all the merchandise that may come. There is 24 feet of water at the south channel and 26 at the north channel, and navigators can sail to her docks without pilots, being lighted or towed.

Tampa is 1,200 miles from Aspinwall, Pensacola is 1,537 miles, Mobile 1,576 miles, and New Orleans 1,578 miles, making Tampa about thirty hours shorter than to the ports named, and is five or six days' time nearer us than by way of New York. Freight can be delivered in Chicago from South America (before it could be delivered in New York) from this port, saving loss of decay, insurance, and the great risk from the dangerous coast.

We find the unhealthy commercial conditions of increase in imports and decrease in exports from the countries named. Two years ago the volume of imports was \$265,000,000, in 1888 it was \$253,000,000. The imports to us from Mexico for 1888 were \$27,272,778, with Central America \$11,754,952. We exported to these countries only \$65,975,759, in exchange for this large volume of trade. The Government reports show that on this \$253,797,648 worth of imports we are doing with them is being done at an extra cost of \$12,000,000 per annum. This came from extra insurance to reach the Atlantic sea-board, in loss by wreckage and goods by length of time taken to reach destination. Nearly all of this can be saved, besides thousands of dollars of freight, by the short route via Tampa Harbor, and millions more of business can be

diverted to us. Europe receives from Bolivia, the Argentine Republic, Brazil, and Uruguay, \$240,000,000, yearly; we certainly should be able to secure part of this.

What are the benefits Florida and the South will obtain from this business, and what benefits will Chicago and the West derive?

Nature has bestowed her rarest gifts on Florida. She is now in the infancy of her development. This great State has only 20,000,000 acres of entered and taxable land; of this only about 75,000 acres are under cultivation. She will produce, probably, 5,000,000 boxes of oranges this year. We find the production of vegetables increasing rapidly; they will ship from 4,000,000 to 5,000,000 crates this year. Three-quarters of all the Sea Island cotton produced in the United States is grown in Florida, and the finest tobacco produced is grown in that State, and this industry is being rapidly developed. The sugar-cane in Florida produces the finest sirup and sugar; large sums of money have been expended in this industry and it is being rapidly developed. The finest timber is found, and the lumber interest for years has been the leading industry in this State. Large cigar factories are found at Key West, Tampa, and Jacksonville, and nearly all tropical fruits are produced.

Tampa about three years ago had about 2,000 inhabitants; now there are over 10,000. Her business amounts to over \$5,000,000 annually. The duty received at that port will amount to over \$300,000 this year; this development is due to the fast mail service between Washington and Tampa Harbor. We understand the Government pays \$180,000 per year for this and \$75,000 per year for the mail service from that port to Havana. From this it is apparent that the Government has gained, and the development of the South in consequence of this service has been millions. Jacksonville, the commercial capital of Florida, has a business of nearly \$50,000,000 each year, with a population of about 25,000. St. Augustine is the Queen City of that State. Its hotels are magnificent, and the intelligence and push of the people we found in Tampa, Jacksonville, Ocala, Sanford, St. Augustine, Orlando, Kissimi, and other places visited by us can not be excelled by any of our Western States. Eastern and Western capitalists have invested large sums in building hotels costing millions of dollars, and over \$50,000,000 have been invested in railroads. Key West has over 200 cigar factories, and produces 100,000,000 cigars yearly. She produces sponges to the value of \$1,000,000; pineapples \$75,000 worth, and her population is 19,000. This development has been rapid, and the producers are looking to see where they can find an outlet for their products.

Georgia is in the same condition as Florida, with its vast resources of cotton, iron, timber, coal, and fruits; it requires better and more rapid transportation facilities and they all look to us to aid them. The fast mail service from Washington to Tampa Harbor and Cuba has made millions of dollars for that State; now they hope by our aid to open up a trade with Central and South America. This will soon bring them fast mail service to Chicago, and with it rapid transit for their products and at reasonable rates to this city, where it will be distributed to the West. We dwell on all these points for the reason of their great importance to the Southern people and the facts as we see them, that this harbor of Tampa is the way to the Gulf by which this city and the West will derive a large and lucrative business.

Our visit was made at a time when we expected to find it unhealthy and uncomfortable, and it is with pleasure that we can tell the people of the West that we were not troubled with anything more disagreeable than our inability to accept the generous hospitality offered us at all points. We found the climate pleasant and cool at night, and only wished our visit could have been prolonged.

Desiring to speak of the fear of yellow fever entertained by Northern people, Dr. G. T. Maxwell, in his report on yellow fever in Florida, says: "Tampa has had the yellow fever only three times in her history; New York, Boston, Philadelphia, and Baltimore have had it many times. The quarantine regulations of the State are rigidly enforced and sanitary measures now being perfected will, we think, exempt in the future Florida from this dread disease."

Whereas Mr. S. A. Jones, of Tampa, Fla., by his untiring zeal and constant efforts to make the visit of this committee pleasant, and to give us every opportunity to investigate, and finding all his statements true: Therefore,

Resolved, That we most heartily recommend Mr. Jones as being worthy of the trust and confidence of the people of the South and West, as well as the commercial bodies he may visit, and from whom he may ask assistance and official indorsement, to insure the success of the enterprise he is engaged in, and that we recommend him to the favorable consideration of all the United States Senators and Representatives in

Congress, and all the committees of the national legislature, in the interests of more close commercial relations with the South, the West, and Central and South America.

GILBERT MONTAGUE,

Chairman Board of Trade Committee.

MAURICE H. SULLEY,

Chairman Commercial Exchange Association Committee.

R. M. LITTLER,

Chairman Produce Exchange Committee.

L. F. SWAN,

Chairman Lumberman's Exchange Committee.

C. F. PEREE,

Chairman Press Delegation.

ST. LOUIS, MO., April 23, 1889.

The undersigned members of the board of directors of the merchants' exchange of St. Louis, having considered the memorial to Congress, issued by the Tampa, Fla., Board of Trade, under date of April 3, 1889, setting forth the advantages of said port as a near and safe route to Cuba, Central and South America, and asking an appropriation of \$1,000,000 to any steam-ship line that will, for five years, carry the United States mail from Tampa Bay to Aspinwall, do hereby approve and indorse said memorial and ask for same the favorable consideration of the Congress of the United States.

CHAS. A. COX,

President.

HUGH ROGERS,

Vice-President.

GEORGE H. MORGAN,

Secretary.

JNO. B. VANDOLFO,

ISAAC M. MASON,

R. M. HUBBARD,

JNO. C. FEARS,

J. B. AMES,

C. H. SPENCER,

H. N. CHANDLER,

Directors.

CHICAGO, ILL., July 6, 1889.

At a special meeting of the board of directors of the produce exchange of the city of Chicago, held this date, John B. Lynch, esq., president, chairman, the following resolutions were presented, and after all members of the board had had an opportunity to express their views upon the same, were unanimously adopted:

Resolved, By the produce exchange of Chicago, that we heartily indorse the memorial submitted by Mr. S. A. Jones, of Florida, to be presented to Congress for the opening up of a direct line of commerce from Chicago and the West to Florida, and also via Tampa Harbor to Cuba, Central America, and South America.

Resolved, That a committee of five be appointed from this exchange, whose duty it shall be (in connection with a like committee from the board of trade, Chicago) to co-operate with the Tampa Board of Trade, with the view to effect an early arrangement for quick transit and cheap rates between Tampa and Chicago and the West.

Resolved, That this committee will urge the Representatives in Congress to give their influence to secure an early opening of this direct line from Chicago and the West to Cuba, Central and South America.

Resolved, That the press of Chicago be furnished a copy of these resolutions and requested to give its sanction and support to this work.

Resolved, That the invitation of Mr. Jones to visit Florida be accepted, and a committee of five be appointed by the president (for which he shall be the chairman) to represent this exchange, who shall respond at the call of the board of trade committee.

ROBERT M. LITTLER,

Secretary Produce Exchange, City of Chicago.

CHICAGO, July 8, 1889.

At a regular meeting of the board of directors of the Lumberman's Exchange, of Chicago, held this day, the following action was had and the following resolutions unanimously adopted:

Resolved, By the Lumberman's Exchange, of Chicago, that we heartily indorse the

memorial submitted by Mr. S. A. Jones, of Florida, to be presented to Congress for the opening up of a direct line for commerce from Chicago and the West to Florida, and also via Tampa Harbor to Cuba, Central and South America.

Resolved, That a committee of three be appointed from this exchange whose duty it shall be (in connection with like committee from the Board of Trade of Chicago) to co-operate with the Tampa Board of Trade with the view to effect an early arrangement for quick transit and cheap rates between Tampa and Chicago and the West.

Resolved, That this committee will urge the Representatives in Congress to give their influence to secure an early opening of this direct line from Chicago and the West to Cuba, Central and South America.

Resolved, That the press of Chicago be furnished a copy of these resolutions and requested to give its sanction and support to this work.

Resolved, That the invitation of Mr. Jones to visit Florida be accepted, and a committee of three be appointed by the president (of which he shall be the chairman) to represent this exchange, who shall respond at the call of the Board of Trade committee.

THEO. F. SWAN,
Secretary.

CHICAGO, ILL., July 9, 1889.

GEORGE F. STONE, Esq.,
Secretary Board of Trade, Chicago:

DEAR SIR: In common with representatives from other organizations in this city we have examined the project submitted by S. A. Jones, of Tampa Bay, Fla., having in view the establishment of a direct line of transportation from the city of Chicago, via Tampa Bay, to the Caribbean Sea ports, and are of the opinion that the completion of the proposed line of transportation would confer great commercial benefits upon the whole country, and especially upon the West, by bringing us in direct communication with the Caribbean Sea and South American ports, and approve the same.

SAMUEL B. RAYMOND,
President.

L. J. LEONARD,
Secretary.

CHICAGO, September 2, 1889.

To the Secretary of the Commercial Exchange, Chicago, Ill.:

The undersigned committee, appointed to visit Tampa Bay, Fla., begs to submit the following report:

The excursion party left Chicago on the evening of July 29 last, and after a short stay at Chatanoga, Atlanta, and Macon, reached Jacksonville, where we were met by a committee representing the Board of Trade, press, and railroads of Jacksonville, who escorted us to Port Tampa.

Ample opportunities were afforded us to inspect the harbor facilities of Port Tampa. Soundings were taken from the deck of a steamer (which was at our disposal), showing a depth of 26 feet in the north channel and a depth of 24 feet in the south channel, the only obstruction being a limestone bar, for the removal of which Congress has already passed an appropriation, and the work of removing same is rapidly progressing. This work being completed, Tampa will have the finest port of entry on the Gulf coast, and one that a mariner can enter without the aid of a pilot.

A route from the South American ports by way of Tampa would be the shortest by 400 miles.

This committee has refrained from making a detailed report embodying the advantages Chicago would receive by a direct commercial relation with Tampa and South America, leaving such a report to be made by Mr. Gilbert Montague, the chairman of the joint committees, but will state that this project merits the consideration of the business men of Chicago and the Northwest.

Respectfully submitted.

MAURICE H. SCULLEY,
Chairman.

LINCOLN, NEBR., September 19, 1889.

At a meeting of the directors of the Lincoln Board of Trade, held at their room on September 19, 1889, the following memorial was unanimously adopted and signed by the officers and members of the board:

The undersigned directors of the board of trade, of Lincoln, Nebr., having considered the memorial to Congress issued by the Tampa (Fla.) Board of Trade under date of April 3, 1889, setting forth the advantages of said port as a near and safe route to Cuba, Central and South America, and asking an appropriation of \$1,000,000

to any steam-ship line that will, for five years, carry the United States mail from Tampa Bay to Aspinwall, do hereby approve and indorse said memorial and ask for same the favorable consideration of the Congress of the United States.

R. H. OAKLEY,
President Lincoln Board of Trade.
A. H. WEIR,
Vice-President.
C. A. ATKINSON,
Secretary.
J. J. IMHOFF,
A. E. HARGRAVES,
C. J. ERNST,
ELI PLUMMER,
M. L. TRESTER,
T. W. LOWRY,
C. H. GERE,
Directors.

The above is a true copy from our records.

R. H. OAKLEY,
President.
C. A. ATKINSON,
Secretary.

OMAHA, NEBR., *September 21, 1889.*

At a special meeting of the directors of the Omaha Board of Trade, held at their office in the chamber of commerce, there was presented, and upon motion unanimously adopted, the following:

Whereas there has been laid before the board of trade a memorial, which is to be presented to the Congress of the United States by the board of trade of Tampa, Fla., memorializing Congress for an appropriation of \$1,000,000 to an American line of steamers that will carry the United States mail from Tampa, Fla., to Aspinwall, Central America, and intermediate points for a term of five years: Believing that such a line would be of great advantage to the Southern, Middle, and Western States and Northern States, we therefore most cordially indorse said memorial and request our Senators and Members in Congress to give their support to the passage of a law in accordance with the terms of said memorial.

W. N. NASON, *Secretary.*
EUCLID MARTIN, *President.*
MAX MEYER, *Vice-President.*
E. E. BRUCE,
C. O. LOBECK,
J. E. ILER,
DANIEL H. WHEELER,
Directors.
HUGH C. CLARK, *Treasurer.*

DES MOINES, IOWA, *September 23, 1889.*

At a meeting of the Des Moines Commercial Exchange Directory Board, held at their rooms this day, the following memorial was unanimously adopted and signed by the officers and members of the board:

The undersigned directors of the Des Moines Commercial Exchange, having considered the memorial to Congress issued by the board of trade of Tampa, Fla., under date of April 3, 1889, asking for an appropriation of \$1,000,000 to an American line of steamers that will carry the United States mail from Tampa, Fla., to Aspinwall, Central America, and intermediate points, for the term of five years: Believing that such a line would be of great advantage to the great Northwestern, Western, Middle, and Southern States, we therefore indorse most cordially said memorial, and would request our Senators and Members of Congress to give their support to the passage of a law in accordance with the terms of said memorial.

[SEAL.]

ISAAC BRANDT,
President.
T. F. SALLECK,
Secretary.

MILWAUKEE, WIS., *September 27, 1889.*

A joint meeting of the officers and directors of the Merchants' Association and Chamber of Commerce of the city of Milwaukee was held September 27, 1889, at which Mr. C. A. Chapin, of the Chamber of Commerce, was elected chairman. Mr. C. E. Andrews, of the Merchants' Association, offered the following, which upon full

consideration and discussion was adopted as the unanimous expression of the meeting:

The officers and directors of the Merchants' Association and board of directors of the Chamber of Commerce of the city of Milwaukee, having listened with great interest to the remarks of Mr. S. A. Jones, of Tampa, Fla., in relation to a memorial to be presented by the Board of Trade of Tampa, Fla., memorializing Congress for an appropriation of \$1,000,000 for the purpose of establishing an American line of steamers carrying United States mail from Tampa, Fla., to Aspinwall, Central America, and intermediate points, for a term of five years, most cordially indorse the memorial and the object. Believing that such a line of steamers would be of incalculable benefit to the Southern, Middle, Western, and Northwestern States, we can earnestly request the Senators and Representatives in Congress from the State of Wisconsin to give their support to the passage of a law in accordance with the terms of the memorial.

C. E. ANDREWS,

President Milwaukee Merchants' Association.

OSCAR MOHR.

W. J. LANGSON,

Secretary of the Chamber of Commerce of Milwaukee.

[Tampa Board of Trade. Office of S. A. Jones.]

TAMPA, FLA., April 3, 1889.

To the Senators and Representatives of the United States in Congress assembled:

We, your petitioners, merchants, shippers, boards of trade, merchants' exchanges, as below specified, represent as follows:

Whereas it has been shown that many millions of dollars can be saved to the people of the Western, Middle, and Southern States, on goods now coming to them from Cuba, Central America, South America, and Mexico that is now coming by the way of New York and the Atlantic sea-board, passing out of the Gulf of Mexico and the Caribbean Sea, through the dangerous reefs of Florida to enter the Atlantic Ocean, and on by Cape Hatteras to reach New York, costing an extra insurance of 24 per cent. and a loss on vessels of \$10,000,000 yearly, saying nothing of the \$1,500,000 loss per year on perishable goods by long shipment;

Whereas it has been shown that \$265,000,000 worth of commerce pass and repass yearly to the Eastern sea-board over this dangerous route; also that out of this amount, \$165,000,000 is consumed, handled, and manufactured west of and including the State of Ohio; and

Whereas it has been shown that Tampa Bay, Florida, is the most practicable Southern harbor on the coast of the United States, through which this \$165,000,000 worth of goods that is consumed and handled in the Western, Middle, and Southern States should enter this country; therefore,

We pray your honorable body to note that it has been shown that all this heavy loss of ships, and loss of extra insurance and perishable goods can be saved to the customers by this new route, and at the same time give a large volume of work to the Southern and Western roads, thereby enabling them at a great saving to carry these goods direct through the South on an air line through the heart of Kentucky, Tennessee, Georgia, and Florida, opening up a rich section of country in these States, making them tributary with the South American trader to the market of the cities of Ohio, Indiana, Illinois, Michigan, Iowa, Wisconsin, Minnesota, Colorado, Nebraska, Kansas, and Missouri, the natural market for all these States, and the Central and South American countries, instead of carrying to them second-handed by the way of New York and the Atlantic sea-board, to be again redistributed to the country at large.

It is also shown that the distance by rail from New York to Chicago and St. Louis is the same as it is from Tampa to St. Louis. This change of route will save over 1,000 miles of transportation for goods now going to New York and Eastern seaboard to find a railroad to transport them to Chicago, St. Louis, Cincinnati, the great inland market of the country for the West and the Northwest, passing the end of an air-line road than can be had over 1,000 miles nearer.

It has been shown that Tampa Bay, since receiving the first indorsement by the cities of the West, has induced large capital to begin the development of the city of Tampa. Congress has made Tampa a customs district and her custom receipts amount to \$20,000 per month; has a bill pending before Congress, and passed the Senate, providing for her public buildings; one to be an international exposition to encourage friendly intercourse between these two countries; has appropriated large sums of money that is now being expended to prepare the harbor for the entrance of the

largest ships; the United States mail is now carried via Tampa to Cuba in sixty-six hours from New York, also the same time from St. Louis and Chicago, over the old time of three hundred and twenty-four hours; the new docks have been finished at Tampa at a cost of \$250,000; the two fastest ships on the American waters, costing a half million dollars, carry you from Tampa to Havana in eighteen hours; the only absolutely fire-proof tourist's hotel in the world is now being completed at Tampa at a cost of several millions of dollars, to accommodate the traveling public of both continents; a new line of ships soon to be run to Vera Cruz, Mexico, carrying the New York and western mails in ninety-six hours via Tampa. The city of Tampa has grown in five years from 1,200 to 10,000 people, with factories that cost \$2,000,000, paying out weekly \$40,000 for labor; the city is lighted with electricity, supplied with fine water-works and street-car lines, and all industries are under headway.

Whereas these new improvements are realities and standing monuments of industry and enterprise, it is of vital and national interest to the people of the United States, as well as the Western, Middle, and Southern States, to foster and give all aid they can to increase our water facilities of transportation at this most practicable place, through which to reach the rich fields of Cuba, South America, and Central America over the most direct, shortest, and cheapest line over which to send our exports and receive our imports: therefore we urgently request and recommend that Congress appropriate, for the further encouragement and development of our southern connections at Tampa, Fla., with the Caribbean sea-ports, \$1,000,000 to any ship line that will for five years carry the United States mail from Tampa Bay to Aspinwall, said ships to be owned by American capital and equipped with first-class passenger accommodations and freight facilities, to be run under such restrictions and regulations regarding the appropriation as may be determined by the Postmaster-General. Therefore we pray your honorable bodies' early and favorable consideration of this matter, not only for the benefit of the people of Florida but of the whole United States, whose interests are directly concerned in communicating and transacting business through Florida with the West Indies, Central America, and South America cheaply and quickly, and by land transportation, instead of by long and expensive route by way of the Atlantic sea-board.

APPENDIX H.

FROM S. A. JONES, OF CHICAGO.

[Office of Gilbert Montague, 6 and 8 Sherman street, chairman of permanent organization on South American Mail Line.]

CHICAGO, ILL., October 8, 1889.

Hon. JAMES G. BLAINE,
Secretary of State, Washington, D. C.:

DEAR SIR: I have the honor herewith to submit for your kindly consideration the report to date of work on a plan unanimously adopted by the South and West, as far as the work has been done, and have no hesitancy in saying Michigan, Ohio, and Indiana will join us, as they have already so indicated, and did join us before in the work to improve Tampa Harbor, Fla.

Report herewith submitted by the various committees after a personal inspection of this scheme and plan speaks all that is needful of the practicability of the line and the abundant capacity of the harbor and the desirability of the route. There has been formed in this city, from the different business organizations, a permanent organization, whose work is to push this matter until the mail line to Aspinwall, via Tampa Harbor, is open. I have been requested, and it has been suggested by the chairman and the various members of this organization and of the different organizations that have indorsed the plan, to lay as early as possible this matter before you for advice. The committees see the importance of the work, and have passed resolutions to use their aid and influence in securing the return of the South American delegates over this route to Aspinwall, the *entrepôt* to their various countries, as they have come to this country by way of Liverpool and the eastern sea-board, and we have noticed the programme of their visit is a hurried trip through the North and West, touching only at New Orleans, on the Gulf, and then to return to Washington.

It is the earnest wish and desire of the people of the West and South that this delegation, when they have completed their work in Washington, to have them return via Tampa, Fla.; arrangements can be made to make the time between Tampa and Aspinwall in less than ninety-one hours. Of course no comment is needed on the result, when they, by this route, find they can reach New York and the East, and Chicago and the West, all within one hundred and thirty-nine hours, and have a short, beautiful, and safe voyage, as against the long and dangerous route they will have to

come, we feel this will go a long way toward convincing them they are our very close neighbors. We desire to know what steps to take to bring about their return over this route, and the different organizations desire to know if the Government will furnish transportation for them, or will charter one of the fine steamers now plying between Tampa and Cuba, which are unexcelled in speed and equipment for comfort by any steamers in any service on American waters.

Knowing of your broad views on these matters, and the interest you have taken in endeavoring to establish closer relation with these countries, we feel you will not deem us intruding in asking this information. I am getting up a condensed report—in a short time it will be in—full and comprehensive. Do you think it will be necessary to obtain the indorsement of any more States before this matter of their returning is laid before the meeting in Washington? By the time next Congress meets we will have the entire official indorsement north and south of the Ohio River.

An early answer with your favorable opinion, and full knowledge of what is needful in such matters, will be happily received and most highly appreciated, by yours, in behalf of the people of the South and West, and the various organizations enlisted in this work, I beg to subscribe myself,

Most respectfully and obediently yours,

S. A. JONES,
68 Sherman street, Chicago, Ill.

APPENDIX I.

FROM THE BOARD OF TRADE OF COLUMBIA, SOUTH CAROLINA.

Hon. JAMES G. BLAINE,

Secretary of State, International American Congress, Washington, D. C. :

SIR: As a committee of the board of trade of the city, appointed especially for the purpose of considering your valued communication of June 17, 1889, in regard to the meeting of the International American Congress, and to reply thereto, we have the honor to say:

That for several years the subject of reciprocal trade, particularly with our very near neighbors, Central and South America, Mexico, and the West Indies, has been a subject of much thought and concern to us whose interests in manufacturing and commerce is developing as never before in the history of the South.

As our manufactured products increase, we look naturally for consumers (customers) to these ports that are to this country *sealed*, owing to the paucity of our merchant marine, and the small amount of reciprocal commerce done by the United States.

According to the report of the South American Commission our trade with South and Central America is—

Imports	\$1, 185, 828, 579
Exports	442, 048, 975
Balance of trade against us.....	743, 780, 604

This is truly wonderful, and the fact patent, that this country is not getting a fair share of this trade, and the greater wonder is that American manufacturers have been and are blind to the great amount of good there is lying ready to their hands in these countries.

The difference in the value of American cottons as compared with Egyptian (our cottons being 25 per centum higher in Liverpool after being carried nearly 4,000 miles when taken to the looms of Manchester) shows the appreciation of English manufacturers for this volume of business.

We therefore enter most heartily into the reciprocity idea, even to the extent of recommending to our General Government the expediency of subsidizing vessels of great speed and heavy tonnage that will make quick and frequent trips to these ports and the ports of Canada, touching at Charleston, Georgetown, and Port Royal.

Respectfully,

R. S. DESPORTES,
DAVID JONES,
J. L. MUNNAUGH,
Committee.

COLUMBIA BOARD OF TRADE,
Columbia, S. C., September 25, 1889.
Unanimously adopted.

C. J. TREDELL,
President.
R. M. ANDERSON,
Secretary.

APPENDIX J.

FROM THE CHAMBER OF COMMERCE, MOBILE, ALA.

Dr. O. F. CAWTHORN, *President,**And Board of Directors of the Mobile Chamber of Commerce:*

SIRS: Your committee on information and statistics, to whom was referred your circular letter of the Secretary of State of the United States, Hon. James G. Blaine dated June, 17, 1889, referring to the Conference of the American States to be held in Washington, D. C., October 2, next, respectfully report:

That they have considered said letter and the accompanying act of Congress of May 24, 1888. They find that Mobile is not especially behind other ports of the United States in commercial relations with Mexico and the South American States, regard being had to the size of the port and the magnitude of its general trade with other foreign countries.

The difficulty is, that no part of our country secures more than a small fraction of the great trade of the other North and South American States. Our great common competitor is Europe, and especially England and the German Empire.

Statistics to be of value to Mobile at the coming Conference, should be to show the superiority of our port over European ports, as a source of supplies to the people, to be represented at such Conference, and not to show superiority over other ports of the United States, who are equally with ourselves destitute of Mexican and South American trade. Your committee had neither time nor means for instituting a compilation of such statistics.

Neither do your committee find themselves able to make suggestions in detail for methods of carrying out the eight propositions contained in the act of May 24, 1888. The purpose of each merits the hearty concurrence of our body.

One fact is clearly apparent. Mobile can not expect to have any trade with foreign, Gulf, and South American ports until there are lines of regular communication established between them, and certain means of transportation from Mobile to such foreign ports, and *vice versa*.

Purchasers can not be expected to come to or deal with a place which has no means of reaching it and has no means of shipping the goods when bought, or only uncertain means, operating at irregular and uncertain times.

On the other hand, transportation can not be expected to seek Mobile for cargoes until it is reasonably certain there will be found something there to take away.

Mobile is in this position: She can not sell to Mexico and South America, even if she has the goods they want, because she has no means of transportation to the purchasers there.

Transportation to these countries does not seek us, because she has nothing to transport in the absence of buyers.

We can not force the Mexican and South American buyers to come here. They are human, and we can only induce them to come. But transportation is mechanical; a mere question of ways and means, and can not be forced to come here.

We can build bridges, as it were, between us and our southern neighbors, and assure them of certainty and regularity of communication; and we may be confident they will not be long in availing themselves of their opportunities and seeking the best market.

Regular lines of steam-ships are such bridges, and over such bridges the commerce of Mexico and South America goes to England and Germany to-day.

There is one practical suggestion, therefore, covering the point embodied in the third proposition in the act of Congress, which the chamber can make. But this is so well stated for our purpose by President J. C. Clarke, of the Mobile and Ohio Railroad Company, in a communication herewith transmitted, that your committee recommend that it be sent to the honorable Secretary of State, as embodying the response the chamber would make to his letter.

FREDE'K G. BROMBERG, *Chairman.*

R. B. OWEN.

RICHARD MELLETT.

WM. H. BARNEY.

MOBILE AND OHIO RAILROAD COMPANY,
OFFICE OF PRESIDENT AND GENERAL MANAGER,
Mobile, Ala., July 11, 1889.

Hon. F. G. BROMBERG,
Chairman of Committee, City:

MY DEAR SIR: After carefully looking over the papers left with me for examination, it would seem, on consulting the maps, that the geographical location of Mobile ought to enable us to handle and share in a fair proportion of the South American import and export trade with the United States. We have short inland lines to the center of production of provisions and breadstuffs; we can supply cheap coal, lumber and iron; our close proximity to the Gulf and low port charges offer inducements to marine tonnage; ship stores and labor abundant at reasonable prices. But to inaugurate and control any portion of this trade, we must have lines of steamers or sailing vessels plying to and from Mobile and these South American States. How shall we get them is the important question. The productions of the country, it is claimed, are stagnant for want of markets to take our supplies. Then wisdom on the part of our National Government would be to grant subsidies to lines to ply between our own and those countries that would take our supplies. These subsidies ought to continue until the trade that may be inaugurated reaches such conditions as to make the line or lines of conveyance self-sustaining to those who invest their capital in marine tonnage.

Mobile is the only sea-port in Alabama. Our representation in the National Congress from the State of Alabama ought to invoke the aid of the Government to make the port of Mobile what it should be—the gateway for imports and exports to and from the West and Northwest and South American countries.

Very truly yours,

J. C. CLARKE,
President and General Manager.

APPENDIX K.

REPORT OF THE COMMERCIAL CONFERENCE AT SAN FRANCISCO, AUGUST 29 AND 30, 1889.

At a meeting of the Chamber of Commerce of San Francisco, held on the 23d day of July, 1889, Capt. William L. Merry presented the following resolutions, which, after due discussion, were unanimously adopted:

Resolved, That prior to the departure of our Pacific coast Senators and Representatives for the National Capital this Chamber of Commerce shall convene in special session, inviting their attendance, and also the Manufacturers' Association, the State Board of Trade, the Board of Trade of San Francisco, the State Viticultural Society, the San Francisco Produce Exchange, the Chamber of Commerce of Los Angeles, the Chamber of Commerce of San Diego, the Chamber of Commerce of Eureka, Cal., the Portland (Oregon) Board of Trade, the Astoria (Oregon) Chamber of Commerce, Tacoma and Seattle Chambers of Commerce, and such other incorporated commercial organizations in California, Oregon, Washington, and Nevada as may be decided entitled to admission by the board of trustees of this chamber to send representatives to a commercial convention called for the consideration of the following subjects:

- (1) The permanent establishment of ocean mail steam-ship lines on Pacific Ocean routes, and the liberal compensation by the Government for the carriage of ocean mails on said lines by steam-ships available for war and transport purposes.
- (2) The application of the interstate-commerce law to the American carrying trade of the Canadian Pacific Railway, or the abolition of the bonding system for railway carriage through foreign territory.
- (3) The maritime defense of Pacific coast ports.
- (4) An ocean telegraph cable to Australia via the Pacific Islands.
- (5) The energetic construction of the Nicaragua Canal as a means of national defense and commercial development.
- (6) The encouragement of maritime commerce and increased energy in the construction of the navy.

Resolved, That the board of trustees of this Chamber of Commerce shall fix the date for said special session, issue the necessary official invitations, and appoint committees to report on the subjects above named.

Resolved, That no other subjects shall be considered at said special session, except by unanimous consent.

In accordance with resolutions adopted by the Chamber of Commerce of San Francisco in regular session July 23, 1889, the chamber met in special session August 29,

1889, at 2.30 o'clock p. m., Hon. Ira P. Rankin in the chair, in commercial conference with the various organizations throughout the Pacific coast, as represented by the following delegates:

Astoria Chamber of Commerce: E. C. Holden, M. C. Crosby, J. W. Case, Saml. Elmore, Hon. J. H. D. Gray.

San Diego Chamber of Commerce: Geo. N. Nolan, Chalmers Scott, John Ginty, Col. John Kastle, C. C. Valle.

Tacoma Chamber of Commerce: Saml. Collyer, M. K. Snell.

Los Angeles Chamber of Commerce: Maj. E. W. Jones, Merrick Reynolds, W. H. Goucher, Harvey Lindley, Capt. H. Z. Osborne.

Portland Board of Trade: J. McCracken, Kenneth Macleay, R. P. Earhart, Henry F. Allen, Wm. Kapus.

Eureka, Cal., Chamber of Commerce: F. A. Weck, J. J. McKinnon, Geo. Hooper, C. B. Stone, John Dolbeer.

Sacramento Board of Trade: E. J. Gregory, D. Lubin, P. E. Platt, L. Williams, Chas. McCreary.

California State Viticultural Society: John T. Doyle, C. Bundschu, J. Frowenfeld, J. A. Stanley, Chas. B. Turrill.

California State Board of Trade: W. H. Mills, John P. Irish, M. M. Estee, N. P. Chipman, Jesse D. Carr.

The Board of Trade of San Francisco: M. P. Jones, Marion Leventritt, Henry L. Dodge, Levi M. Kellogg, Benj. Schloss.

The Produce Exchange of San Francisco: Geo. W. McNear, W. A. Holcomb, C. B. Stone, Max Brooks, F. W. Eaton.

The Manufacturers' Association of San Francisco: Wm. Harney, A. S. Hallidie, Wm. T. Garratt, Irving M. Scott, Alanson H. Phelps.

The Federated Trades of the Pacific Coast: W. A. Bushnell, M. McGlynn, W. J. B. Mackay, J. C. Millan, H. Whitham.

COMMITTEES APPOINTED TO REPORT ON SUBJECTS NAMED.

On the permanent establishment of ocean mail steam-ship lines on Pacific Ocean routes, and the liberal compensation by the Government for the carriage of ocean mails on said lines, by steam-ships available for war and transport purposes:

San Francisco Chamber of Commerce committee.—Capt. Chas. Goodall, Capt. Oliver Eldridge, Capt. John H. Freeman, Geo. H. Sanderson, and John L. Howard.

Conference committee.—Capt. William L. Merry, J. W. Case, John Kastle, E. W. Jones, M. K. Snell, J. McCracken, F. A. Weck, John T. Doyle, E. J. Gregory, W. H. Mills, Levi M. Kellogg, C. B. Stone, and Irving M. Scott.

On the application of the interstate commerce law to the American carrying trade of the Canadian Pacific Railway, or the abolition of the bonding system for railway carriage through foreign territory:

San Francisco Chamber of Commerce committee.—A. S. Hallidie, Albert Gallatin, Robert Watt, and Arthur R. Briggs.

Conference committee.—Wm. T. Garratt, Samuel Elmore, C. C. Valle, W. H. Goucher, M. K. Snell, R. P. Earhart, John Dolbeer, Chas. B. Turrill, E. J. Gregory, J. P. Irish, Benjamin Schloss, W. A. Holcomb, William Harney, A. S. Hallidie, and Arthur R. Briggs.

On the maritime defense of Pacific-coast ports:

San Francisco Chamber of Commerce committee.—Irving M. Scott, Geo. K. Porter, F. S. Wensinger, P. B. Cornwall, and F. A. Haber.

Conference committee.—Willard B. Harrington, M. C. Crosby, Chalmers Scott, H. Z. Osborne, Samuel Collyer, William Kapus, F. A. Weck, C. B. Turrill, P. E. Platt, J. P. Irish, M. Leventritt, C. B. Stone, and A. S. Hallidie.

On an ocean telegraph cable to Australia via the Pacific islands:

San Francisco Chamber of Commerce committee.—Hugh Craig, Chas. R. Allen, J. G. Jackson, Michael Castle, and Capt. Chas. Nelson.

Conference committee.—Capt. William L. Merry, J. H. D. Gray, John Kastle, E. W. Jones, M. K. Snell, J. McCracken, F. A. Weck, John T. Doyle, E. J. Gregory, W. H. Mills, Levi M. Kellogg, C. B. Stone, and Irving M. Scott.

On the energetic construction of the Nicaragua Canal as a means of national defense and commercial development:

San Francisco Chamber of Commerce committee.—Capt. William L. Merry, William Harney, Peter Dean, John Everding, and E. W. Newhall.

Conference committee.—Col. C. L. Taylor, E. C. Holden, Geo. N. Nolan, Merrick Reynolds, Samuel Collyer, K. Macleay, George Hooper, J. A. Stanley, Charles McCreary, N. P. Chipman, H. L. Dodge, F. W. Eaton, and A. H. Phelps.

On the encouragement of maritime commerce and increased energy in the construction of a navy:

San Francisco Chamber of Commerce committee.—R. G. Sneath, W. W. Montague, Capt. C. L. Dingley, Geo. W. McNear, and Chas. H. Wells.

Conference committee.—Capt. William L. Merry, J. W. Case, John Kastle, E. W. Jones, M. K. Snell, J. McCracken, F. A. Week, John T. Doyle, E. J. Gregory, W. H. Mills, Levi M. Kellogg, C. B. Stone, and Irving M. Scott.

REPORT ON THE PERMANENT ESTABLISHMENT OF OCEAN MAIL STEAM-SHIP LINES ON PACIFIC OCEAN ROUTES, AND THE LIBERAL COMPENSATION BY THE GOVERNMENT FOR THE CARRIAGE OF OCEAN MAILS ON SAID LINES, BY STEAM-SHIPS AVAILABLE FOR WAR AND TRANSPORT PURPOSES, AS ADOPTED BY THE CONFERENCE.

The following propositions were submitted by resolution to your committee for consideration:

"The permanent establishment of ocean mail steam-ship lines on Pacific Ocean routes, and the liberal compensation by the Government for the carriage of ocean mails on said lines, by steam-ships available for war and transportation purposes."

The foregoing reference embraces three propositions, which your committee, for convenience, will consider separately.

1. "The permanent establishment of ocean mail steam-ship lines on the Pacific Ocean routes."

The existing ocean steam-ship lines which naturally fall within the scope of your committee's investigation are:

JAPAN AND CHINA.

1. Pacific Mail Steam-ship Company, American; employing four steam-ships on the American register, alternating about every eleven days with the

2. Occidental and Oriental Steam-ship Company's steamers, four in number; chartered from the White Star line of Liverpool. These chartered British steamers alternate with the Pacific Mail Company's vessels.

3. Canadian Pacific line of chartered British steam-ships, three in number, which provide a four-weekly service between Japan and China, and Vancouver, British Columbia.

The United States Post-Office Department pays no subsidy for postal or other purposes to the American line between San Francisco and China. The remuneration for carriage of the United States mail is ocean letter rates, which amounted to \$13,229.34 in 1886-'87, and about \$14,000 in round figures last fiscal year.

This amount is divided between the two American companies running American and chartered steam-ships to Japan and China from San Francisco, in proportion to the size of the mail carried by each, respectively. The Pacific Mail Company's vessels being on the American register are paid ship's letter and inland postage rates; the chartered vessels of the Occidental and Oriental Company are paid ship's letter rates only.

The distance covered by the vessels is about 12,763 miles each round voyage. The mail service averages about thirty-three round trips each year. The United States Government pays an average of \$427 per round trip for carrying its China mail. This payment can not be termed adequate remuneration for such postal services, and as contrasted with payments for railroad mail transportation, the injustice done to American steam-ships engaged in the foreign trade is at once apparent. The Post-Office Department pays American railroads for carrying the United States domestic mail an average of 10.95 cents per mile. If the same rate of payment were made to American steam-ships in the foreign trade by the Post-Office Department it would be some encouragement to steam-ship owners, but this is not the case, and the practical effect of the post-office law at present is to discourage the employment of American steam-ships in foreign commerce.

The Canadian Pacific Company established a four-weekly line of steamers between Vancouver, British Columbia, and China and Japan, in 1887, and ran them in opposition to the two steam-ship lines trading out of San Francisco.

The Canadian line was established in expectation of a substantial subsidy, which has since been realized.

A ten years' contract has been entered into by the British and Canadian Governments with the Canadian Pacific Company, by which the latter is to receive \$400,000 a year for a four-weekly mail service, with three steam-ships between Vancouver, Hong-Kong, and Shanghai. The sea distance is considerably less on each round trip than the distance covered by the Pacific Mail and Occidental and Oriental vessels.

It is only necessary to contrast the postal subsidy payable to the British-Canadian line to China with the payment by the United States Government for carrying its mail by the American line from San Francisco to China, to realize the immense advantage British commercial interests enjoy over American commercial interests in the China trade. Thus, for the services of three steam-ships, making thirteen round trips each year, the owners are to receive for carrying the British mail in excess of \$37,769 per round voyage. The United States Government enjoys the services of eight steam-ships sailing from San Francisco, making an average eleven-day service, the steaming distance being considerably greater than on the British line, and it pays the owners and charterers for carrying the American mail \$427 per round voyage, as already presented.

The statement of this fact is enough to condemn the parsimonious policy of our Government in respect to ocean commerce, and to excite admiration for the liberal and progressive policy of England and Canada. The intention is that the Pacific Ocean line from Vancouver to China shall connect by the Canadian Pacific Railroad at Quebec and Halifax in summer and winter, respectively, with a weekly line of fast steam-ships to run from those ports to Liverpool, and for which England and Canada have contracted to pay an annual subsidy of \$500,000.

The steam-ships for the Canada-Atlantic and Canada-Pacific lines are to be built under the admiralty rules, and to be capable of being converted into unarmored cruisers without delay or modification of any kind. For this the British admiralty pays a handsome bonus upon each vessel, and stipulates to make adequate compensation to the owners should the Imperial Government incorporate any of the ships in the navy of Great Britain. The amount of such payment can not be ascertained, but it is understood to be large.

The establishment of the Canadian Pacific Steam-ship line to China and Japan has had the effect of diverting a considerable amount of United States freight from the American railroads and steam-ship lines, making San Francisco their terminus. The Chief of the United States Bureau of Statistics reports an increase of 90 per cent. on the half year ended December 31, 1888, over the preceding half year, in the quantity of merchandise exported from the United States to China and Japan by the Canadian Pacific Railroad. The weight of the merchandise so transported for the six months in question is given at 2,175 tons, as against 5,488 tons for eighteen months ended December 31, 1888. The principal export in the last six months of 1888 consisted of 2,394½ tons New England cotton goods, which showed that American manufactures are being shipped from Eastern points to China by the British steam-ship line, and not from San Francisco by an American line. As a further illustration of this diversion of trade, Vice-President Towne, of the Southern Pacific Railroad, stated before the Senate Interstate Commerce Committee that whereas the imports of tea by the American lines had decreased nearly 2,822 tons in 1888 as compared with 1887 the imports by the Canadian Pacific has increased by 1,849 tons.

The aggregate trade of the Dominion proper with China and Japan on the basis of goods entered for consumption and exported was \$2,261,155 in 1888.

The aggregate value of the Japan and China trade of the United States in 1888 was \$44,109,139, or about twenty times greater than the trade of Canada with those countries, yet the United States Government pays only \$14,000 a year for its important and frequent China mail service; while England and Canada have contracted to pay \$400,000 a year for an unimportant four-weekly service. England is also to pay a heavy construction bonus for naval purposes on the vessels employed. With such special advantages the Canadian Pacific can afford to quote rates which must drive the American lines out of the China trade, and inflict an almost irreparable injury upon San Francisco.

NORTH PACIFIC LINE TO BRITISH COLUMBIA.

1. Pacific Coast Steam-ship Company, American; runs a line of steam-ships every five days to Victoria, British Columbia, thence to Puget Sound ports and Alaska.

The Canadian postal department pays \$1,470 per month for mail service performed by the company, or \$17,640 per annum. The United States Government paid this company for one year \$219.28 for carrying the American mail to British Columbia in fifty voyages. Comment upon these figures is superfluous.

MEXICAN AND CENTRAL AMERICAN LINE.

1. Pacific Mail Steam-ship Company, American; runs five steam-ships on the main line from San Francisco and Panama, touching at Mexican and Central American way ports, and forms connection with the Atlantic line of the same company at Aspinwall, by the Panama Railroad. Carries the United States mail. During coffee season makes three trips per month; fortnightly service at other times.

Receives ship's letter rates and inland postage for carrying the United States mail to Mexican and Central American ports of the Pacific Coast to Panama. The payment for this important and expensive service last year was an insignificant sum. The distance traversed each round trip is about 5,200 miles.

2. Pacific Mail Steam-ship Company, American; runs three coasting steamers from Central American ports to Panama.

3. Pacific Coast Steam-ship Company, American; runs one steam-ship monthly to Mexican ports from San Francisco. Is paid ship's letter rates and inland postages for the limited quantity of mail carried.

4. A small Mexican steamer runs to and from San Francisco in opposition to the American vessel, and enjoys special advantages. The Mexican Government pays the owners \$2,700 per monthly trip; and they get an abatement of \$650 monthly on port charges. This is equivalent to a subsidy of \$40,200 yearly. In addition to this direct money payment to the Mexican steam-ship owners, American shippers have a rebate of 2 per cent. of customs' duties who patronize the line. To meet this, the American vessel is compelled to accept very low rates for freight or withdraw from the Mexican trade.

On the other hand, the United States collect tonnage dues on this Mexican steamer of about \$600 per trip, and on account of a similar discrimination occurring in New Orleans, and as a retaliatory measure, orders have been issued by the Secretary of the United States Treasury to exact 10 per cent. duty on all goods hereafter imported by vessels under the Mexican flag.

The Marquis de Campo established a Spanish line of steamers between San Francisco and Panama about three years ago, but although subsidized by Spain and the Central American Government, it was not a success, and the vessels, four in number, were withdrawn after about a year's trial. This abortive attempt to drive the Pacific Mail Company off the Mexican and Central American trade suggests the possibility of more effective opposition in the interests of British shipping after the China and Australian trade has been captured from American steam-ship lines.

AUSTRALIAN, NEW ZEALAND, AND HAWAIIAN LINES.

1. Oceanic Steamship Company of California; American; employs four steamships to perform this important service, two of which are on the American and two on the Hawaiian register.

The Australian and New Zealand line provides a four-weekly service between San Francisco, Auckland and Sydney, which covers all Australian colonies; and as the vessels of this line call each trip at Honolulu, alternating with a direct steamer to that port, the Hawaiian Islands enjoy a fortnightly mail service with this coast. For this service, the Hawaiian Government pays \$24,000 a year subsidy to the Oceanic Company.

The Australian line is subsidized by the Governments of New Zealand and New South Wales. These colonies pay in subsidy and bonuses about \$200,000 yearly under the present contract. Up to November, 1885, the United States simply paid the steamship companies carrying the American mail to Australia and Oceania ship letter rates, ranging yearly from \$4,000 upwards. It would be a liberal estimate to average the general payments for postages by the United States to the steamships on the Australian line since 1870 at \$10,000 per annum.

When the contract with the Oceanic Company was being entered into in 1885 the United States Postmaster-General was requested by the New Zealand Government to contribute an equitable share of the subsidy, and he consented to pay \$20,000 a year for three years, which was intended by him to cover the transportation of the bulky United States mail to Honolulu, Samoa, New Zealand, Fiji, Australia, Tasmania, and other places in the South Pacific. This was not considered sufficient by the colonies, and great dissatisfaction at the niggardly policy of the United States was expressed. So strong did this feeling become that in 1888 the New Zealand legislature passed a resolution instructing the Government not to renew the contract after 1889, an extension for that year being agreed to. This extended contract expires November, 1889, so far as New Zealand is concerned.

The action of the New Zealand parliament and the general dissatisfaction of the colonies having been strongly presented to the Postmaster-General, he consented to pay \$50,000 per annum for the United States Australian mail. This decision was not arrived at, however, until after the order to discontinue the California mail route had been made by the New Zealand legislature. It became operative for the present year, but inasmuch as one of the steam-ships owned by the company is not on the American register a reduction is made, the actual payment being \$46,800. Of this amount the Oceanic Company receives \$28,666 and the colonial governments \$17,332 toward reducing their payment on account of subsidy.

It thus appears that the United States, with a population of 60,000,000, pays less than one-fourth the amount now contributed to the Australian mail service by New Zealand and New South Wales, which have jointly a population of 1,600,000. And it should be noted further that these British colonies pay this relatively large subsidy to an American steam-ship company for postal facilities of which the United States avails itself more than they do. The ratio of the United States mail carried by the Oceanic Company's steamers is that of five American pouches or bags to four British and colonial bags of mail.

The United States, while not contributing any substantial amount to the Australian mail service for many years, collected a large sum annually from the British post-office for the transportation of the Australian mail by railroad from New York to San Francisco. This charge has averaged for a considerable period about \$80,000 yearly, and its imposition forms a serious objection by the colonies to the continuance of the California mail route.

New South Wales has conditionally agreed to continue this service for another year, but as yet nothing has been definitely settled. The colonies are reported to be willing to pay half the subsidy for an efficient fortnightly mail service on the San Francisco route if the United States post-office pays the remaining half. This is a very liberal offer and calls for reciprocal action by the United States.

Meanwhile the Canadian Pacific is in the field urging its claims for a subsidy to a competing line from Vancouver to Australia. If the United States Postmaster-General could at once guaranty half the subsidy for a fortnightly Australian mail service, the colonial parliaments being now in session, the question might be speedily settled in favor of the San Francisco route; but this can not be done, and every day's delay improves the chances of the Canadian Pacific and weakens that of the American line.

The Australian mail service was established by New Zealand and New South Wales in 1870, and has been maintained by them ever since with the exception of one year's interval before the Pacific Mail Company got the contract in November, 1875, and which it held till November, 1885, when it was taken up by the Oceanic Company. The Pacific Mail Company withdrew from the Australian trade because without substantial aid from the United States Government the line would not pay with the greatly reduced colonial subsidy then offered.

It has cost the two colonies named about \$5,000,000 to maintain this distinctly American mail service. The United States payment for carrying its Australian mail has not averaged \$10,000 per annum for the seventeen years of actual running, but taking it at that figure there is a total expenditure of \$170,000.

In point of fact, however, the United States Post-Office derived a large net revenue from the Australian postal line, established and maintained by colonial enterprise. The Post-Office retained all postages on mail matter originating in the United States, which was far in excess of its payments to the steam-ship owners for postal services; and it collected a further sum for railroad transportation of the closed British mail, which may be estimated at not less than \$60,000 per annum for the entire duration of the service.

In 1880-'81 Congress appropriated \$20,000 which the colonies received as a refund for that year of what was considered to be an excessive charge. Deducting this sum and the average payments to the steam-ships, there is an apparent aggregate net revenue to the United States Post-office on the Australian mail of \$330,000, plus postages in excess of ship's letter rates. On the other hand, New Zealand alone, with a population at the present time of about 600,000, has paid in direct subsidies and bonuses to this line \$3,021,465 since its establishment. What wonder if New Zealand declined to continue this subsidy, when the United States, whose commerce was being extended and which derived the greater share of the postal and other advantages not alone refused to pay an equitable amount for carrying its mail, but made it a source of revenue. Yet New Zealand is willing to bear a fair proportion of the cost of establishing a fortnightly service to San Francisco jointly with the United States.

Even the little kingdom of Hawaii, with a population of 80,000 people, paid a much larger sum annually, for the past eight or ten years, for its mail between Honolulu and San Francisco, a steaming distance of about 4,000 miles each round trip, than the United States, with its fifty or sixty millions of people paid for its Hawaiian, New Zealand and Australian mail, the steaming distance being 14,400 miles the round voyage.

The Oceanic Steam-ship Company will receive from the United States Post-office during 1889, for thirteen complete voyages \$23,666, or about \$2,205 per round trip of 14,400 miles. During the three previous years it received \$20,000 per annum, or \$1,538.46 per round trip; and for ten years previously the Pacific Mail Company did not average more than half that amount for performing a similar service for the United States Government. The burden of maintaining the Australian mail service via San Francisco fell upon two small British communities, and American steam-ship lines earned nearly all the colonial subsidies. This is hardly creditable to the United States.

The Australian mail service has developed a very important and increasing trade from San Francisco to Hawaii, Samoa, New Zealand, and Australia. The value of the Australian trade with the United States last year was \$16,196,458, of which \$3,407,358 fell to the share of San Francisco. The bulk of Australian trade was with the East. The maintenance of this mail service is therefore of the utmost commercial importance to Eastern manufacturers and shippers. It is capable, however, of very great development. The foreign commerce of the Australian colonies in 1887 aggregated \$539,029,745; last year in round figures, it amounted to \$600,000,000, with a population of about four millions in all the colonies.

England controls this trade, and pays large subsidies to the Peninsular and Oriental, and Orient Steam-ship lines for postal purposes to enable her to retain it. The Australian colonies also subsidize these lines, and the British India Steam-ship Navigation Company—a very powerful organization—is also subsidized by the Queensland Government. New Zealand also pays a subsidy of \$100,000 a year for a direct steamer service to England in addition to its contribution to the San Francisco service. Yet the experience of most of the colonies in question is that the postages nearly recoup the subsidies, the payment of which develops commerce.

The Canadian Pacific is endeavoring to obtain a subsidy for a line of steam-ships from Vancouver to Sydney via Fiji, with a branch line from Fiji to Auckland. The Dominion Government has promised a subsidy, and a conference of representatives of the various Australian Governments has been arranged to meet a Canadian representative and discuss the terms upon which Australia will participate in the Canadian project. Should this conference come to a mutual understanding and agreement, it is intended by New South Wales to withdraw from the San Francisco mail service and take up the Canadian Pacific line to Vancouver. This would be very injurious to American commerce, and especially so to San Francisco, which benefits largely from Australian travel. The danger is imminent, and should be met by prompt defensive measures. The establishment of a fortnightly American steam-ship line to Auckland and Sydney from San Francisco suggests itself as the most direct and effective way to preserve the Australian trade.

STEAM-SHIP COMPENSATION.

The second proposition in the reference to your committee is "the liberal compensation by the Government for the carriage of ocean mails on Pacific Ocean routes."

Having presented in the foregoing recital the policy of the United States Government in regard to ocean mail payments, and its necessarily injurious effect upon the foreign commerce of the country, it is proper to consider the remedy that should be applied. And here your committee have the practice of other countries to guide them.

England has built up her vast shipping interests by liberal subsidies paid to steam-ship companies for postal services. France, Germany, and Italy are following England's example with marked success. An English parliamentary commission recently elicited the information from Clyde ship-builders that orders from the continent of Europe for ships were now rarely secured, the bounty system and subsidies having led to the establishment of great ship-building yards in France and Italy especially. These countries will soon be wholly independent of England for their ships, the adoption of the British policies having accomplished that for them.

England paid \$5,950,000 in steam-ship subsidies in 1854. After our civil war, the payment of subsidies was reduced to \$4,000,000, but it was soon increased to \$6,107,000, and thereby England succeeded in checking the attempt at competition by American steam-ship lines. The Brazil service established by John Roach was run off by a competing English line guaranteed 8 per cent. on the capital stock by the British Government. The same policy is being applied to the Pacific Ocean trade. The China trade is already doomed; so also is the Australian and Central American trade unless Congress adopts prompt and effective measures to preserve and extend our commercial influence in the Pacific.

Without going into details, it appears to your committee that the French system is best adapted to meet the exigencies of the case. The United States is practically without a merchant navy. England has in round figures an excess of 3,000 steam-ships in the foreign trade, with a carrying capacity of over 3,000,000 tons. The United States has 40 steamships in the foreign trade of 75,000 tons. The total tonnage of England is about 6,000,000 tons; of the United States about 800,000 tons. American bottoms now barely carry 14 per cent. of American foreign trade; in 1855, 75½ per cent. of our foreign commerce was carried by American ships.

Steam-ships and sailing vessels must be built in America if we are to become a powerful maritime nation; and they must be built upon terms which would enable their owners to obtain them as cheaply as they could buy them abroad. There is a difference in builders' cost of 15 per cent. in favor of British iron or steel ships as

against American ships. This difference should be made good by a bounty, but that would hardly suffice under actual conditions. The great demand for ships under such a policy would necessarily increase wages, hence add to the cost of construction. The bounty should cover that, and it should also be sufficient to induce capitalists to establish new ship-building yards and foundries to supply the wants of the American foreign trade.

The French bounty system would probably suffice, and should have a test of at least fifteen years. France pays \$11.58 per ton bounty for iron or steel hulls; \$7.72 per ton bounty for composite vessels; \$3.86 per ton bounty for wooden vessels. A further sum of \$3.52 bounty is paid for every 225 pounds of boilers and machinery placed on board; also a navigating bounty of 29 cents per ton for each thousand miles traversed, the payment being reduced 1 cent per ton for every year the vessel floats. In addition to this, iron or steel vessels built according to the marine department plans receive a further bonus of 15 per cent. France also pays heavy postal subsidies. The Messageries Maritimes Company, in the Australian and China trade, receives in all about \$2,500,000 a year.

Italy pays a construction bounty of \$5.70 per ton for iron and steel; also a considerable bounty on engines and boilers, a navigation bounty and other specific advantages which need not be enumerated.

Germany aids liberally in construction and pays heavy postal subsidies, the North German Lloyds in the Australian and American trade receiving \$1,100,000 a year.

Spain pays very liberal postal subsidies, and is extending its commerce, a new Spanish steam-ship line from Genoa to Colon having been announced recently. Spain pays to its postal routes to Mexico, the West Indies, and the United States \$1,022,640 per annum, and the lines from Havana to the United States receive \$20,687 per voyage.

The necessity for a navigation bounty to American steamships as well as a liberal construction bounty will be evident from the fact that the cost of sailing an American vessel is far greater than that of sailing an English or other foreign vessel of the same tonnage. According to the United States consular reports, English officers and men receive 38 per cent. lower wages than American crews, while the American crews demand 27 per cent. better fare than the English. This comparison is for the Atlantic voyage; if a Pacific voyage were selected the difference against the American owners would be more marked still, because on the Pacific trade the men insist upon higher wages and more expensive food supplies.

Congress therefore should protect American vessels engaged in the foreign trade as fully as the owners of vessels of any other nation are protected by their Governments. If it does not do so it will be impossible for American ships to be built and compete with foreign vessels in ocean commerce. They are wholly unable to do so now. As an illustration of this your committee would cite the fact that of a total grain fleet last season at San Francisco numbering 289 vessels, only 60 were American, while 199 were English, the remainder belonging to other nationalities. Estimating the freight at 30 shillings per ton, foreign ship-owners must have received \$5,165,304 freight from this State last season, while American ship-owners only earned \$929,838. Freight is always paid in gold, and it appears to your committee that it is the pressing duty of Congress to stop this immense drain of gold and enable Americans to build and sail steamships and other vessels to compete upon equal terms in the open market for a share of the world's commerce while handling their own.

FORMATION OF A NAVAL RESERVE.

This brings your committee to the last point, namely, that "the United States mail should be carried on American vessels available for war and for transport purposes."

National safety demands that this should be the case. England is girdling the world with swift unarmored cruisers, built as men-of-war, but sailed as passenger and mail boats in time of peace. The terms of the Canadian Pacific contract for the China service, and of Messrs. Anderson's contract for the connecting Atlantic line serve to disclose the policy of England upon this point, and should lead to the adoption, by the United States, of a similar policy. France, Germany, Italy, Spain—indeed all maritime countries—have adopted the English method of creating a naval reserve while stimulating trade and commerce. England pays liberally for the privilege of supervising the construction of these ships, and this country can afford to outdo her in liberality. There is no time to be lost. American interests are spreading; American commerce is the largest factor in the world's trade; and America should not be at the mercy of any foreign power to destroy its commerce at pleasure. Our flag should be on every sea, and the National Government should have the means at its command to protect it.

CONCLUSIONS.

Your committee, from a consideration of the foregoing, would submit the following resolutions for adoption :

Whereas it is of the utmost national importance to maintain and improve the existing American steam-ship lines on the Pacific Ocean, and to establish new steam-ship routes for the extension of American commerce; and

Whereas an enlightened policy of national defense demands the formation of a strong naval reserve to co-operate with the national ships in time of war,

Be it resolved, That Congress be requested to adopt measures whereby the following results may be obtained, namely:

To enable the American-China line from San Francisco to compete successfully with the subsidized British-China line from Vancouver.

To establish and maintain at least one new and efficient steam-ship line between San Francisco and South American ports.

To establish and maintain a fortnightly mail and passenger service between San Francisco and Australia, touching at Honolulu, Samoa, and New Zealand.

To maintain the independent Hawaiian mail steam-ship service.

To develop American trade with Canada by paying an adequate amount for the conveyance of the United States mail to British Columbia ports.

To maintain and extend the existing American steam-ship service between San Francisco and Panama, calling at Mexican and Central American ports.

To encourage American steam-ships to engage in the Mexican trade by placing them in a position to compete successfully with subsidized vessels of any nationality.

And be it further resolved, That in order to encourage American ship-building and to create a strong naval reserve, as well as to establish and maintain the above-mentioned Pacific steam-ship routes, all of which are absolutely essential to the extension of American commerce, Congress be requested to adopt the French scale of construction, navigation and naval bounties, for iron or steel, composite and wooden vessels; provided that no steam-ship intended for the American foreign trade shall be entitled to receive a bonus from the navy appropriation unless it shall have been built according to the rules of the Navy Department and enrolled in the navy reserve list.

That for the better development of American trade and commerce it is a primary condition of success that liberal payments should be made to American steam-ships carrying the United States mails, to enable them to compete with subsidized foreign vessels on the same routes.

That Congress be requested to enact the necessary laws to give effect to these resolutions and appropriate a sufficient sum for the above-mentioned purposes.

REPORT ON THE ENCOURAGEMENT OF MARITIME COMMERCE AND INCREASED ENERGY IN THE CONSTRUCTION OF A NAVY, AS ADOPTED BY THE CONFERENCE.

We find that for twenty years past the United States has stood fourth in rank among the great commercial nations of the world. Her zenith in export and imports footed \$1,586,490,598 in 1880, or about \$100,000,000 more than last year.

Great Britain's highest point was at \$3,563,877,370 in 1883, of which she dropped \$335,000,000 within four years thereafter, and showing an excess of imports of about \$400,000,000.

Germany is second in rank, commercially, with about two-thirds the trade of Britain, but uniformly steady, and exports and imports about equal.

France did her best at \$2,087,903,694 in 1882, and has lost some \$300,000,000 of commerce since, and buys from \$100,000,000 to \$200,000,000 worth more than she sells annually.

Spain's last figures were her best—which in 1886 were \$305,433,469, and just doubling her commerce in sixteen years, with exports and imports nearly equally divided, and the movement gradually increasing.

The commerce of the United States nearly doubled in seventeen years, and was greatest from 1880 to 1882 inclusive. The balance of trade ran largely against her from 1848 to 1875, but for the twelve years past it has been much in her favor, until the last year, when it ran against her slightly.

Those of our neighbors nearest to us, on our own continent, and more nearly related in form of government than any other people, are prominent among those holding the balance of trade against us. They assure us, however, that this is contrary to their expressed will and desire, and that they prefer looking to our country for many articles of commerce rather than elsewhere, but have been denied this privilege through want of proper facilities of transportation, which they are not able to pro-

vide for themselves. Even the Australian colonies of Great Britain have frequently expressed their desire to have closer and increased trade relations with us and have offered to meet us more than half way in justifying the maintenance of more effective transportation lines.

CARRYING TRADE.

The shipping of the United States in mixed tonnage, engaged in the foreign, coasting and fishing business, reached its greatest magnitude in 1861, when it stood at 5,539,813 tons. In 1888 the figures were 4,191,916 tons, showing an apparent loss of 1,348,897 tons; but as the tonnage was rapidly changing from sail to steam, the difference shown in the above footings is misleading.

We will, therefore, convert steam tonnage into sail tonnage by the usual process of multiplying by three, in order to reach a fair comparison.

Growth of foreign commerce.

	Steam.	Sail.	Total.
Foreign vessels entered:	<i>Tons.</i>	<i>Tons.</i>	
1888	6,600,194	5,426,142	12,026,336
1864	729,730	1,782,817	2,512,042
Gain in mixed tonnage			9,514,289
American vessels entered:			
1888	1,632,657	1,734,100	3,366,767
1864	153,230	1,502,209	1,655,434
Gain in mixed tonnage			1,711,333
Converting steam to sail, 1888.			
Foreign			25,226,924
American tonnage			3,971,507
Gained in twenty-four years:			
Foreigners			21,255,417
Americans			545,736
Total efficient tonnage engaged in foreign trade			32,714,980

Foreigners gained thirty-nine times as much as Americans.

American tonnage was double that of foreign in 1864.

Foreign tonnage was treble that of American in 1888.

Growth of American shipping engaged in the foreign, coasting, whaling, and fishing trades.

Years.	Foreign.	Coasting.	Whaling.	Fishing.	Total.
1864	1,486,749	3,245,265	95,145	159,241	4,986,400
1888	919,302	3,172,120	24,482	76,012	4,191,916
Apparent loss					794,484

Converted to sail it stands:

1888	7,488,056
1864	6,942,320

Gain, tons

545,736

And we have sold to foreigners, from 1861 to date, 1,398,548 tons.

Our lake and river tonnage shows a small decrease in the same time, but in efficiency is, no doubt, largely increased by the use of steam.

EXPORTS AND IMPORTS.

Our exports and imports in 1888 were \$1,486,593,039.

Our exports and imports in 1864 were \$475,285,271.

Foreign vessels carried in 1888 78 per cent of tonnage and 80.92 per cent. of its value.

American vessels carried in 1888 22 per cent. of tonnage and 13.48 per cent. of its value.

Freight carried by foreign vessels was worth \$100 per ton.

Freight carried by American vessels was worth \$60 per ton.

Steam-ships of Americans carried 7.45 per cent. of merchandise value.

Steam-ships of foreigners carried 79.13 per cent of merchandise value.

Since 1864 the exports and imports have doubled and the tonnage employed has in efficiency trebled. This increase in tonnage over freight requirements is no doubt due to the large and increasing passenger transportation service.

Our Bureau of Statistics only take an account of immigrants, and we do not find any authority giving the figures of the passenger movement, and therefore can not determine the extent of this service or by whom it was performed.

Over half a million immigrants came by sea in 1888, while the entrances and clearances of vessels footed over 30,000,000 tons, to which, if carrying capacity is estimated, we may add 15,000,000, making 45,000,000 of tonnage, with an earning capacity of perhaps \$200,000,000 annually.

If we should now add \$200,000,000 more for passenger service, and make the carrier service \$400,000,000 per annum, we would perhaps not be much out of the way.

It is not surprising, then, that Great Britain can import \$400,000,000 worth more than she exports, when it is seen that most of that money is paid out by our country to her in the carrying trade, and which affords more net profit to her than ordinary exports to the same amount.

This trade has enabled foreigners to build and equip the most magnificent steam-ships and sailing vessels the world has ever seen. Humiliating as this may be to our people, there is a hidden danger therein of much more serious importance. These mammoth steam-ships and sailing vessels that we have brought to life, and now the pride of our own countrymen, are subject at any moment to be withdrawn by their respective governments for purposes of war. We are thus without ships to carry our products abroad at a time when they would be most needed and the best results could be obtained. And if by any means the war should be with this country we would learn a lesson never to be forgotten in that we have educated an alien population in all the qualifications necessary to man a grand fleet of navy vessels, and have admitted these into our innermost thoughts, and places wherein we may be most defenseless. We would never more build vessels with our own money under the supervision of aliens for war purposes of their own. And when these, our favorite ships, were mounted with monstrous foreign guns and pointed at us—their creators—together with the astounding demand of your money or your lives, we would shrink into utter nothingness at the evidence presented of our consuming stupidity.

A COMPARISON WITH OTHER COUNTRIES.

We are exporting in agricultural products nearly \$600,000,000 worth, in which there is but little profit, and less than \$100,000,000 in manufactured goods, on which there may be a good profit. We are suffering our unprotected farmers to contend with the ryots of India, the coolies of China, and the serfs of Russia in furnishing the world with a supply of cheap food in which there can be but little profit.

We are establishing mechanical labor unions throughout our country in order to secure greater prosperity to our laborers, and then inviting 1,000,000 of aliens annually from abroad to partake of our generous hospitality and wise provisions. We are educating our youth to higher and nobler efforts than required in the mechanical arts, and importing adult artisans to fill up the ranks.

Other countries are fostering their manufacturing and productive capacity by supplying the wants of other countries, through their commercial marine, and thus contesting with the world, while we are running over each other and destroying our productive factories in competition for home trade.

They control the exchanges of the world, and we furnish them the gold as a basis, and then pay them a royalty for their signatures. They sit in judgment, through their Lloyds, to fix the character and value of our shipping, and, as competitors, benefit by their rulings, from which there is no appeal.

Their flags reach the remotest corners and by-places of the earth, while our nationality is not manifested by the flags flying in our own harbors. They tax their ships on the net profits earned, and we tax ours for all they are worth, and force them to seek shelter under other flags.

We all sign treaties not to discriminate against each other's ships in port charges, and they, through postal contracts and military necessity bills, sustain their ships, while we observe the treaties, and lose our carrying trade.

England pays \$3,500,000 annually for postal packet service, and we pay \$500,000, and most of that goes to them. Foreign powers have a permanent head to their maritime affairs, where the accretions of dearly-bought experience may rest with the assurance of its practical utility at the proper time. We change our heads of departments every four years, and allow our experience to be thrown to the winds.

They command the respect, admiration and following of the world, and have for many years, while we are just becoming known as a power. England expends some

sixty millions annually on her navy and untold millions in favors to her merchant marine. We expend grudgingly about fifteen millions on our Navy, and next to nothing on our merchant marine.

The other great powers educate their young men to fill responsible positions in the interests of both war and commerce, while we employ them and let ours go idle. They contend with all their vigor and means, assisted by their Government, in securing the most remunerative employments for their people, while we accept with indifference what they may choose to leave us.

Europe supplies us with our sugar at a good profit—something we can furnish better than she can—and we pay for it in agricultural products, in which there is no profit. We send our products, mails, and passengers to eastern South America, via Liverpool, by the carriers of our competing foreign friends, and expect our commerce to grow; and all these and many more are methods of statesmanship that have been discovered by our people and for which we are clearly entitled to a patent.

OUR WEALTH AND RESOURCES.

In extent of territory and sea-coast, variety of soil and climate, wealth of resources, and general intelligence of her people, the United States stands second to none of the great nations of the earth. And when our commerce shall have reached around the world, and she has a navy to protect it and the people in their homes, she will be a fitting example of the beneficent results of liberty and freedom under a republican form of government.

This conclusion would have been reached ere this had the agricultural interest of the great interior portion of our country been better informed in relation to the effect on their prosperity of liberal provisions on the part of Congress toward our mercantile marine. Had our farmers realized that the building of ships and ship-yards, the opening of a multitude of iron mines, the building of factories and towns to supply distant countries with our manufactured products, and the consequent withdrawal of a large number from overcrowded agricultural pursuits to engage in new enterprises, they would long ago have persisted in demanding of Congress better transportation facilities by sea. In the early history of this country, when the agriculturists lived near the sea, commerce thrived.

The advent of more commerce and an increased navy means the employment of a multitude of officers, artisans, men of affairs, seamen, and common laborers—many of whom may be idle to-day for lack of employment. In fact, there is not a calling at present but what would receive a new impulse leading to better things. And no one can say that rendering ourselves independent as much as possible, and protecting our lives and property, is not the direct line of duty.

Therefore be it resolved:

(1) That a permanent Bureau of Navigation be established to look after the interests of commerce and check at once any move made by other countries to our disadvantage.

(2) That Congress provide for the payment of a direct bounty from the Treasury to all builders of wood, iron, and steel vessels, steam or sail, to be engaged in the foreign trade, or between Atlantic and Pacific ports of the United States, and using American material; said bounty to be equal to the import duty which would have been collected upon the importation of foreign material of like description and quantity, or the alternate of the French bounty system as follows:

\$11.58 per ton bounty for iron or steel hulls,
7.72 per ton bounty for composite hulls,
3.86 per ton bounty for wooden vessels.

And a further sum of \$3.52 bounty for every 225 pounds of boilers and machinery placed on board, also a navigating bounty of 29 cents per ton for each thousand miles traversed, the payment being reduced 1 cent per ton for every year the vessel floats. In addition to this, iron or steel vessels, built according to the Navy Department plans, to receive a further bonus of 15 per cent.

(3) That Congress further enact an apprentice system for all vessels of the United States employed upon the high seas.

(4) That the maritime laws of the United States be so amended as to control the pilot services in all ports of the United States.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING

SANITARY AND QUARANTINE REGULATIONS

IN

COMMERCE WITH THE AMERICAN REPUBLICS.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

Report of the International Conference on the subject of International sanitary regulations.

JULY 11, 1890.—Read, referred to the Committee on Epidemic Diseases and ordered to be printed.

INTERNATIONAL SANITARY REGULATIONS.

To the Senate and House of Representatives :

I invite your attention to the accompanying letter of the Secretary of State, submitting the recommendations of the International American Conference, for the better protection of the public health against the spread of contagious diseases.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 11, 1890.

DEPARTMENT OF STATE,
Washington, July 11, 1890.

THE PRESIDENT :

For the information of Congress, I beg leave to submit herewith a copy of a report adopted by the International Conference, recommending the establishment of a uniform system of sanitary regulations to prevent the spread of epidemics in commerce between the American nations.

The sanitary officers of the gulf cities of the United States have hitherto found great difficulty in protecting the public health against contagious diseases brought by shipping from South American, Central American, Mexican, and West Indian ports, without restricting the freedom of commerce. At certain seasons of the year the quarantine regulations which they have been compelled to adopt have often placed an absolute embargo upon communication with the tropical countries where such diseases originate. The same difficulties have been experienced in a like measure by the neighboring nations; and the attention of sanitary specialists, both in Europe and America, has been for years engaged in the task of devising some remedy

International sanitary conventions were held at Rio de Janeiro in 1887, and at Lima, Peru, in 1889, and were composed of eminent scientists who gave the subject their closest investigation. At both these conventions regulations were framed for the protection of shipping and of ports exposed to infection, which agree in all their essential provisions. Those of the convention of Rio de Janeiro were adopted by Brazil, Paraguay, Uruguay, and the Argentine Republic, and are now enforced in the ports of those nations. The recommendations of the Lima conference have not been carried into effect. Colombia, Venezuela, and the nations of Central and North America were not represented at either convention, but they are equally interested in securing the results desired; and the International American Conference recommends the acceptance and enforcement by them of the regulations of the Rio de Janeiro convention, or those adopted at Lima, as the best systems that have yet been devised. Copies of both are furnished herewith for the information of Congress.

Respectfully submitted.

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT ON SANITARY REGULATIONS.

To the honorable the International American Conference:

The committee appointed to "consider and report upon the best methods of establishing and maintaining sanitary regulations in commerce between the several countries represented in this Conference" has finished its task, and as the result thereof, has the honor to submit to your distinguished consideration a resolution for your adoption, to which is attached, as accompanying appendices, the full text of the proceedings of the International Sanitary Convention of Rio de Janeiro, of 1887, and the draft of convention agreed upon by the Sanitary Congress of Lima, of 1889.

One of the most important subjects submitted to the honorable International Conference is, without doubt, to decide upon methods tending to prevent the conflict which may arise at the time of epidemic invasions between the diverse sanitary regulations which the American nations have seen fit to adopt in order to shield themselves from such invasions.

If the regulations of sanitary police have in view the harmonizing of the exigencies of public health with the principle of free communication between countries, it is evident that international sanitary conventions are called to put that harmony into practice by means of uniform and impartial regulations, which shall consult the general interests of the countries in their commercial relations.

The committee has carefully examined the work of special conferences and congresses which have met at different times in several parts of the world, and has reached the conclusion that it has duly discharged its duty by making a selection from among those works which are the result of exhaustive studies made by men eminent in the science of medicine in Europe as well as in America.

Complete isolation, which theoretically appears to be the most effective prophylactic against the invasions of epidemic diseases, does not afford, in practice, satisfactory results as a sanitary measure, but tends,

on the other hand, to notably injure the commercial interests of the countries. The distinguished professor, Dr. Francisco Rosas, president of the Sanitary Congress of Lima, thus expresses himself on this point :

It is scientifically demonstrated by innumerable facts that the closing of ports and frontiers does not prevent the invasion of epidemics; that these enter and develop with greater violence in the countries which pretend to isolate themselves, because, under the mistaken belief that they are free of all danger, they disregard the proper means to restrain the development of the epidemic and, above all, to lessen its severity.

But if absolute isolation as a prophylactic is nothing more than an illusion, the same may not be said of the sanitary means that modern science has placed within our reach for the disinfection of infected localities, as well as to prevent the introduction and development of contagion in those which have remained in a state of health.

The committee did not enter deeply into this branch of the subject, because the Rio de Janeiro Convention, as well as the draft of the Lima Congress, the adoption of which is recommended, start with the fundamental principle that the absolute closing of ports and frontiers should be renounced, for the reason that if this were put in practice international sanitary conventions would be unnecessary.

The Rio de Janeiro Convention and the draught of the Congress of Lima are works which have exhausted, so to speak, the subject which engages our attention, and because of the accuracy, clearness, and care with which they have been edited, they may serve as a model, with respect to form and general idea, for sanitary conventions. Therefore, the committee thinks it should recommend them to the consideration of the honorable International American Conference.

THE RECOMMENDATIONS OF THE CONFERENCE AS ADOPTED.

The International American Conference, considering :

That under the existing state of the relations between the nations of America, it is practicable and advisable, for the promotion of these relations, to establish perfect accord with respect to sanitary regulations ;

That the greater part of the ports of South America on the Atlantic are guided and governed by the decisions of the International Sanitary Convention of Rio de Janeiro, of 1887 ;

That although it does not appear that the plans of the Sanitary Congress of Lima, of 1888, have passed into the category of international compacts, it is to be hoped that they will be accepted by the Governments that participated in the said congress, because those plans were discussed and approved by medical men of acknowledged ability ;

That the Sanitary Convention of Rio de Janeiro, of 1877, and the draught of the Congress of Lima, of 1888, agree in their essential provisions to such an extent that it may be said they constitute one set of rules and regulations ;

That if these were duly observed in all America they would prevent under any circumstances the conflict which usually arises between the obligation to care for the public health and the principle of freedom of communication between countries ;

That the nations of Central and North America were not represented either in the Sanitary Convention of Rio de Janeiro or the Congress of Lima ; but that they might easily accept and apply to their respective ports on both oceans the sanitary regulations before cited :

Recommends to the nations represented in this Conference the adoption of the provisions of the International Sanitary Convention of Rio de Janeiro, 1887, or the draught of the Sanitary Convention of the Congress of Lima, of 1888.

APPENDIX.

CONVENTION OF RIO DE JANEIRO.

We, Maximo Tajes, lieutenant-general, president of the Oriental Republic of Uruguay, to all to whom these presents shall come, hereby announce:

That on the 25th and 26th days of November, of the year one thousand eight hundred and eighty-seven, there were agreed upon and signed between our plenipotentiary and those of the Argentine Republic and the Empire of Brazil, duly authorized by the appropriate full powers, and international sanitary convention and corresponding ordinance, of which the literal tenor is as follows:

His excellency, the president of the Oriental Republic of Uruguay, her highness, the Princess Imperial Regent, in the name of his majesty, the Emperor of Brazil, and his excellency the president of the Argentine Republic, having resolved to join in a sanitary convention, named for the purpose as their plenipotentiaries the following:

His excellency the president of the Oriental Republic of Uruguay (named) Don Carlos Maria Ramirez, envoy extraordinary and minister plenipotentiary upon special mission to his majesty the Emperor of Brazil.

Her highness the Princess Imperial Regent (named) the Baron of Cotegipe, of the council of his majesty the Emperor, senator, and grandee of the empire, dignitary of the Imperial Order of the Crozier, commander of the Order of the Rose, Grand Cross of that of our Lady of the Conception of Villa Vicosa, of Isabel the Catholic, of Leopold of Belgium, and of the Crown of Italy, president of the Council of Ministers, and minister and secretary of state for foreign affairs, and of the interior for those of the empire.

His excellency the President of the Argentine Republic (named) Don Enrique B. Moreno, envoy extraordinary and minister plenipotentiary to his majesty the Emperor of Brazil, who, having mutually presented their full powers, which were found to be in good and proper form, agreed upon the following articles:

ARTICLE 1.

The three high contracting parties agree to adopt the following definitions:

Exotic contagious diseases.—The yellow fever, cholera morbus, and Oriental plague.

Infected port.—One in which any of the diseases mentioned prevails in epidemic form.

Suspected port.—1st, one in which there shall have occurred some isolated cases of any of the contagious diseases: 2d, one which has easy and frequent communication with infected places; 3d, one which does not adequately guard itself against infected ports, with reference to the principles of this convention.

The designation of a port as infected or suspected shall be made by each Government, in the proper case, on the report of the chief of the maritime sanitary service, and officially published.

Infected vessel.—One in which there shall have occurred any case of a contagious disease.

Suspected vessel.—1st, one which, while proceeding from an infected or a suspected port, shall not have had during the voyage any case of contagious disease; 2d, one which, while proceeding from a clean port, shall have touched at an infected or suspected port, excepting in the case excepted under paragraph 10 of Article 8; 3d, one which, during the voyage or on arrival, communicates with another ship hailing from a port which is unknown, infected, or suspected; 4th, one in which deaths shall have occurred from unknown causes, or in which there shall have been several cases of any disease; 5th, one which shall not have brought a clean bill of health from the port of departure, as also from intermediate ports, duly viséd by the consuls of the country of destination in those ports; 6th, one which, having been quarantined or subjected to special sanitary treatment in any of the quarantine stations of the three contracting states, shall not come provided with the international certificates of admission to free intercourse.

Suspected objects, or objects deemed capable of retaining or transmitting contagion.—Clothing, cloths, rags, mattresses, and all articles of personal use and service, as well as bags, trunks, or boxes, used for the keeping of these objects, and also untanned hides. Other articles not before specified, as well as animals on the hoof, shall not be deemed suspected.

ARTICLE 2.

The Governments of the three high contracting parties shall establish their respective sanitary services in such manner as to enable them to carry out and comply with the stipulations of the present convention.

The chiefs of the said sanitary services shall communicate with one another whenever it may be necessary, and each of them shall be at liberty to make to the others such suggestions as he shall deem desirable with reference to the exercise of their functions.

For the administration of the sanitary services there shall be issued an international ordinance making uniform the general or special provisions applicable to the three states.

ARTICLE 3.

The high contracting parties undertake: 1st, to establish the necessary quarantine stations, it being desirable that land quarantines shall be established upon islands; 2d, to establish and maintain, during the prevalence of epidemics, at least one floating quarantine station; 3d, to establish, in connection with the land quarantine, floating hospitals for the treatment of persons attacked by exotic contagious diseases in ships arriving, in those already at anchor, and in the quarantine stations; 4th, to deem valid, for the purposes of this convention, in any of their ports, the quarantines and sanitary measures resorted to in any of the quarantine stations of the three states, provided they shall be officially authorized in an authentic manner; 5th, to abstain from closing their respective ports, and from excluding any vessel, whatever may be the sanitary condition on board thereof.

ARTICLE 4.

No vessel, proceeding from foreign ports, shall be admitted to free intercourse in the Brazilian, Argentine, or Uruguayan ports without having first been subjected to a sanitary visit by the proper authorities, save in the case excepted from paragraph 10 of Article 8. In such visit, the said authorities shall carry on the investigations necessary for the complete ascertainment of the sanitary condition on board, and shall determine the treatment to which the vessel must be subjected, the captain being notified in writing.

ARTICLE 5.

For the execution of the provisions of the foregoing article the high contracting parties agree to distinguish three kinds of vessels: 1st, steamers carrying less than one hundred steerage passengers; 2d, immigrant transports, that is, steamers which, whether they carry the mails or not, carry more than one hundred steerage passengers; 3d, sailing vessels.

1.—Vessels of the 1st and 2d classes must carry a physician on board and be provided with—

A steam disinfecting stove.

A supply of disinfectants and disinfecting utensils, in accordance with the international sanitary ordinance.

A drug schedule book, in which shall be entered the quantity and kind of drugs or medicines on board at the moment of exit from the port of departure, as also the additional supplies which it may have received at the intermediate ports.

A book for the registration of medical prescriptions.

A clinical record in which shall be noted in fullest detail all cases of sickness occurring on board and the treatment adopted in such cases respectively.

A passenger list indicating the number, age, sex, nationality, profession, and residence.

The list of the officers and crew.

The manifest of the cargo.

2. The books mentioned in the foregoing paragraph shall be opened and marked ("rubricados") and their leaves stamped by the consul of one of the contracting states in the port of departure; and the leaves referring to each voyage shall be closed by the sanitary authorities of the port of destination.

The commanders of vessels shall not pay any charges for the official handling ("habilitacion") of said books.

3. All the vessel's papers shall be submitted for examination to the consular authority in the port of departure, and to the sanitary authority in the port of arrival, it being incumbent upon the former to note upon the bills of health, on vising them, the presence or absence, total or partial, of the books and lists named in paragraph 1 of this article.

ARTICLE 6.

All vessels destined to any one of the three countries must bring a bill of health issued by the sanitary authority of the port of departure, viséed by the consuls of the countries to which they are destined at the port of departure and at intermediate ports. Said bill of health shall be presented to the sanitary authorities of the ports

of the three states to be viséd, and shall be delivered to the sanitary authorities of the last port to which the vessel shall proceed.

1. The sanitary certificate heretofore issued by consuls shall hereafter be dispensed with, there being substituted therefor the viséing of the bill of health, for which service the consuls shall collect the proper fees.

2. The consular visé shall be written on the back of the bill and authenticated with the seal of the consulate.

3. When, in the light of the information obtained and of the accurate ascertainment of the facts, the consul shall have no comment to make upon the statements of the bill of health, the visé shall be a simple one; in other cases the consul himself shall note, in continuation of the visé, such statements as he may deem proper for the correction of the statements of the bill of health.

Bills of health which shall have been corrected on being viséed in the the first port of any of the three countries at which the vessel shall touch, shall be accompanied by a sanitary certificate ("billette sanitario") signed by the authorities of said port, and in which shall be set forth the treatment to which the vessel shall have been subjected. At the end of the visé shall be noted the issuing of the certificate.

4. The consuls in the ports of departure shall try to secure information in the local sanitary districts, or in the best manner open to them, of the sanitary condition of the said ports, and must immediately communicate, in case of a correction of a bill of health, with the sanitary authorities of their own countries, which will communicate to those of the other contracting states the reasons and occasion for the correction.

5. Vessels touching at ports of the three countries must take out in each of them a bill of health. These bills shall be delivered by the commander to the authorities of the last port into which the vessel shall go.

6. The high contracting parties recognize two kinds of bill of health—the clean and the unclean; a clean bill of health being one which records no case of exotic contagious disease in the port of departure or at intermediate ports, and an unclean bill being one which records an epidemic, or isolated cases of any of the diseases mentioned.

7. The ships of war of friendly nations shall receive bills of health gratuitously.

ARTICLE 7.

Each of the high contracting parties undertakes to establish in due constitutional form in its territory a corps of *sanitary inspectors of vessels*, composed of physicians specially charged with the supervision, on board, of the vessels on which they shall have embarked, the compliance with of the rules adopted for the promotion of the health of passengers and crew; to observe what occurs during the voyage and report the same to the sanitary authorities of the port of destination.

1. The sanitary inspectors of vessels shall be officials of the maritime sanitary districts of the countries to which they belong.

2. The sanitary inspectors of vessels shall be named by the Governments after competition, it being incumbent upon the chiefs of the corresponding sanitary service to designate the inspectors who are to embark.

3. The international sanitary ordinance shall formulate the program and objects of the competition, as also the duties and powers with which the sanitary inspectors of vessels are to be invested.

ARTICLE 8.

In the ports of each of the contracting states there shall be established two kinds of quarantine; the quarantine of observation and the strict quarantine.

1. The quarantine of observation shall consist of the detention of the vessel during the time necessary for the making of a searching sanitary visit thereto.

2. The strict quarantine shall have two objects: 1, to ascertain whether, among the passengers coming from any infected or suspected port, there is any one suffering from a contagious disease in process of maturation; 2, to subject to disinfection articles supposed to retain or transmit contagion.

3. The strict quarantine shall be applied: 1, to infected vessels; 2, to vessels on board of which there shall have occurred cases of a disease not identified, or which could not be properly investigated by a sanitary visit.

4. The duration of the strict quarantine shall be determined by the maximum period of incubation of the contagious disease which is sought to prevent, that is, ten days for the yellow fever, eight for the cholera, and twenty for the oriental plague. This term may be computed in one of two ways: 1, counting from the date of the last case occurring during the voyage; and 2, counting from the date of the landing of the passengers at the quarantine station.

5. The strict quarantine shall begin with the date of the last case occurring during the voyage, when the following three conditions shall be presented: 1, that the vessel shall comply with the requirements of paragraphs 1, 2, and 3, of Article 5; 2, that

it shall have carried on board thereof a sanitary inspector of vessels who shall certify the exact date of the termination of the last case, the compliance with all the measures for disinfecting indicated in the instructions which such inspector shall have received from the chief of the sanitary service, in accordance with the international ordinance, and the perfect present condition of health on board; 3, that the local sanitary authorities confirm the correctness of the report made.

6. If, under the conditions specified in the foregoing paragraph, the time elapsed between the last case and the arrival of the vessel be equal to or greater than the maximum incubating period of the contagious disease, the passengers shall be admitted to free intercourse, as shall also the vessel, provided that the latter does not bring suspected articles.

If the vessel brings suspected articles that need disinfecting and which have not been disinfected, the admission of the vessel to free intercourse shall take place only after the disinfection of said articles shall have been completed.

In other cases, the vessel and passengers shall be subjected to a strict quarantine.

7. If the time elapsed since the last case of contagious disease should be less than the maximum period allowed for incubation, and if the vessel be in the case described in paragraph 5, the passengers shall be subjected to an additional quarantine for the number of days lacking to make up the said maximum period of incubation. Such additional quarantine shall be undergone at the quarantine station save when there shall not be at said station available room for the purpose, in which case the quarantine may be undergone on board.

8. If the vessel, at the time of its arrival, has on board persons suffering from contagious disease, these shall be lodged in the floating hospital, and the passengers subjected to quarantine in the floating station. The quarantine in such case shall be computed from the date of the transfer of the passengers to such station.

The vessel shall be dealt with as may have been provided for such emergencies by the international ordinance.

9. The provisions of the foregoing paragraph shall apply likewise to vessels in which there shall have occurred cases of contagious disease, though these no longer exist at the time of arrival, if such vessel, notwithstanding, shall not have satisfied the conditions set forth in paragraph 5 of this article.

10. Suspected vessels which shall have made the voyage from an infected or suspected port to the port of arrival in a period of time shorter than the maximum period of incubation of the contagious disease which it is sought to prevent, shall also be subjected to the additional quarantine according to the provisions of paragraph 7.

There shall be excepted from this quarantine any vessel of the 2d class which, proceeding from a port recognized as clean and with satisfactory sanitary conditions on board, certified to by the sanitary inspector of vessels, shall touch at Montevideo, Rio de Janeiro, or Buenos Ayres during the prevalence of an epidemic, but shall restrict itself to discharging her merchandise, landing passengers, and leaving and taking up the mails; provided that these operations shall be performed by means of a ponton designated for the purpose by the sanitary authorities, conveniently situated, free from all infection, and under satisfactory conditions as to isolation, so that it shall not receive on board, nor undergo contact with, any person or article from said ports. These facts shall be certified to by a document duly authenticated, signed by the sanitary authorities of the port at which the vessel shall touch, viséed by the consul of the country of destination, and attested by a sanitary inspector of such country of destination.

11. A suspected vessel which shall have made the voyage in a period longer than the aforesaid maximum period of incubation, shall undergo the quarantine of observation, in the course of which there shall be made the investigations prescribed in the international ordinance; and only after it shall have been ascertained that no case of contagious disease has occurred on board shall such vessel be admitted to free intercourse.

It is understood that, if such vessel brings suspected articles which have not been disinfected, but which can not have infected the passengers or crew, such vessel shall undergo a strict quarantine for the purpose of disinfecting the said articles, such disinfection to be made after the landing of the passengers brought, who must be admitted to free intercourse.

In case infection may have occurred, the case shall be governed by the provisions of the last part of paragraph 6 of this present article.

12. The foregoing provisions concerning vessels of the 1st class described in Article 5 shall hold good even though there be on board no sanitary inspector of vessels, provided there shall have been strict compliance with the requirements of the international ordinance as to the responsibility assumed by the ship's physician to the sanitary authorities of the port of arrival in respect of the certificates which he is to give under his professional oath, and provided that there shall have been exact compliance, during the voyage, with the provisions contained in the instructions as to the duties of the sanitary inspector of vessels.

13. The provisions of the foregoing paragraphs, in so far as they allow some modification of the strict quarantine, shall apply to such vessels of the 2d class as, 1, shall receive on board and give a first-class passage going and coming to the sanitary inspector of vessels; 2, shall act upon the recommendations of the sanitary inspector looking to sanitary conditions on board ship, both at the time of departure and during the voyage.

In other cases the period of strict quarantine shall not be computable as provided in alternative No. 1 of paragraph 4, in respect of either the passengers or the vessel itself.

ARTICLE 9.

The requirements of paragraph 1 of Article 5 are binding upon all such vessels as, in any of the three countries, enjoy the privileges of a mail-transport, and to this end the contracting Governments undertake to withdraw such privileges from all vessels which, four months from the date at which this convention shall have gone into effect, shall not have strictly complied with the said requirements.

ARTICLE 10.

The high contracting parties agree that they will grant the privileges of a mail-transport only to such vessels as shall conform to this convention and shall furthermore prove to the proper sanitary authorities that they have complied with the requirements of paragraph 1 of Article 5, and declared their acceptance of conditions 1 and 2 of paragraph 13 of Article 8.

ARTICLE 11.

The sanitary precautions which the high contracting parties may have to take on land and within their own territories form no part of the subject-matter of this convention; but it is understood that such precautions are never to amount to an absolute suspension of intercommunication by land. The Governments concerned will, upon occasion, agree with one another upon the places through which communication is to be allowed, and upon the most efficacious means to prevent all danger of the introduction of epidemics.

ARTICLE 12.

The present convention shall last four years, dated from the day on which ratifications shall be exchanged, and shall continue in force until one of the high contracting parties shall notify the others of its intention to terminate it, its operation ceasing twelve months after the date of such notification. Such ratifications shall be exchanged at the city of Montevideo at as early a date as possible.

In testimony whereof the said plenipotentiaries respectively sign and seal these presents. Done at the city of Rio de Janeiro, on the 25th day of the month of November, in the year of the nativity of our Lord Jesus Christ one thousand eight hundred and eighty-seven.

[L. S.]
[L. S.]
[L. S.]

CARLOS MARIA RAMIREZ.
BARON DE COTEGIPE.
ENRIQUE B. MORENO.

CONVENTION OF LIMA.

PLAN OF AN INTERNATIONAL SANITARY CONVENTION FORMULATED BY THE AMERICAN
SANITARY CONGRESS OF LIMA OF 1888.

ARTICLE 1.

The contracting countries agree to adopt the following definitions:

(a) *Pestilent exotic diseases*.—The yellow fever, the Asiatic cholera, and the eastern plague.

(b) *Infected port*.—That in which any of the above diseases may exist in an epidemic form.

(c) *Suspected port*:

1. That in which an isolated case of the three pestilential diseases may appear occasionally;

2. That which has easy and frequent intercourse with infected localities; and

3. That which is not sufficiently protected against infected ports.

The declaration of infected or suspected, as applied to a port, shall be made by the Government of the country to which that port belongs, upon the recommendation of the chief of the maritime sanitary service, and shall be published officially.

(d) *Infected vessel*.—That in which some case of pestilential disease may have occurred.

(e) *Suspected vessel* :

1. That which, coming from an infected or a suspected port, may not have had during the voyage any case of pestilential disease ;

2. That which, though proceeding from a healthy port, may have touched at an infected or suspected port.

3. That which during the voyage or on arrival should communicate with another vessel coming from an unknown infected or suspected port.

4. That in which deaths may have occurred from causes not specified or from repeated cases of any disease.

5. That which does not bring a clean bill of health from the port of departure or from those at which it may have touched, duly certified by the consuls of the country it is bound for; and

6. That which, although having been quarantined or been subjected to special sanitary treatment in any of the contracting countries, comes unprovided with the international permit for free intercourse.

ARTICLE 2.

The contracting countries shall establish the sanitary services so that they may carry out and cause to be carried out the provisions of this convention.

The chiefs of the aforementioned sanitary services shall communicate with each other whenever necessary, and each of them may make to the others such suggestions as they may think proper in the exercise of their duties. International regulations shall be issued for the performance of sanitary service, giving uniformity to the general and special measures applicable in other countries.

ARTICLE 3.

The contracting countries shall bind themselves—

1. To establish the quarantine hospitals which may be necessary, and those of a permanent character shall be located on islands ;

2. To establish floating hospitals, annexed to the permanent quarantine hospitals, for the treatment of persons attacked by exotic pestilential diseases on the vessels which may arrive or be already at anchor ;

3. To consider valid at any of the ports, for the effect of this convention, the quarantine and sanitary measures resorted to in any of the quarantine hospitals of the contracting countries, provided that they shall be officially authorized in an authentic manner ; and

4. Not to resort to the closing of ports.

ARTICLE 4.

The consul of the country for which the vessel is bound shall have the right to attend the sanitary inspections which the agents of the territorial authorities may make of the vessels.

ARTICLE 5.

At the port of departure the vessels shall take the following prophylactic measures :

1. The storage of the cargo shall not commence until the cleansing of the vessel shall have been performed either by ordinary methods or by a special process of disinfection, in case the latter shall be deemed necessary. For this purpose the vessel shall be visited by the captain and the ship-surgeon, and the result of the visit shall be recorded on the ship's register.

2. The surgeon shall examine the passengers which may come on board, and who hail from a port where any of the exotic pestilential mala dies exist, and shall reject such as he may suspect of having contracted any of them.

3. In regard to those who may appear to him as being under good conditions, he will vigilantly prevent their taking on board white linen clothes, or bedding, stained or suspicious.

4. The wearing apparel and bedding used by such as may have died of exotic pestilential diseases shall never be received.

5. Whenever any of the exotic pestilential diseases shall show itself on a vessel

while lying in an infected port, the patients in whom the first symptoms of these affections may be noticed shall be put ashore immediately, and all their effects, as well the bedding they may have used, shall be destroyed or disinfected.

ARTICLE 6.

During the voyage vessels will observe the following prophylactic measures:

1. The soiled underwear of the passengers and crew shall be washed on the same day, after being immersed in boiling water or a disinfectant solution.
2. The water-closets shall be scoured and disinfected at least twice a day.
3. During the voyage the most rigorous cleanliness and a thorough ventilation shall be observed on board of suspected vessels.
4. As soon as the first symptoms of an exotic pestilential disease are confirmed, the necessary steps shall be taken to isolate the patient.
5. The localities occupied by such patients shall be immediately disinfected.
6. So far as possible the localities so infected shall remain wide open and isolated, and shall not be occupied by any other passenger during the voyage.

ARTICLE 7.

No vessel proceeding from foreign ports shall be admitted to free intercourse at the ports of the contracting countries, without the previous sanitary visit made by the proper authorities. During this visit, the official shall proceed to make all the inquiries necessary to ascertain thoroughly the sanitary condition on board; in times of epidemic, they will satisfy themselves that all measures of sanitation and disinfection have been rigorously complied with, as well at the point of departure as during the course of the voyage, and shall determine the treatment to which the vessel must be subjected, and will notify in writing the captain thereof.

ARTICLE 8.

For the proper enforcement of the provisions of the preceding article the contracting countries agree to recognize two classes of vessels; a first and second class.

1. Vessels of the first class are those which have a surgeon on board and are provided with:

- (a) A disinfecting stove worked by steam under pressure;
- (b) A supply of disinfectants and appliances for disinfection in compliance with the suggestions of the international sanitary regulations;
- (c) A book showing the stock of drugs, wherein shall be inscribed the quantity and kind of the drugs or medicines on board at the moment of sailing from the port of departure, as well as the supplementary acquisitions received at the port of relay;
- (d) A record book of medical prescriptions;
- (e) A clinic book in which shall be most minutely described all the cases of disease occurring on board and their respective treatment;
- (f) A list of passengers giving their name, age, sex, nationality, profession, and place of residence;
- (g) A list of the crew; and
- (h) A manifest of the cargo.

2. The books referred to in the preceding paragraph shall be opened and signed by the consul of some one of the contracting countries at the port of sailing; and the leaves having reference to each voyage shall be closed by the sanitary authority at the port of destination.

Commanders of vessels will pay no fee whatever for the supply of these books.

3. All the papers on board shall be submitted for inspection to the sanitary authority at the port of destination and to the consular authority at the port of departure, it being the duty of the latter to indicate on the bills of health, when visé or certified to, the existence or total or partial absence of the books, and the list and roll alluded to in the first paragraph of this article.

4. Vessels of the second class are those which do not possess the requirements stated in the first paragraph of this article.

ARTICLE 9.

The vessels engaged in the transportation of passengers, belonging to any of the contracting countries, are obliged to comply with the conditions of vessels of the first class, and likewise such foreign vessels as may be engaged in the same traffic upon the coasts of the contracting countries.

ARTICLE 10.

All vessels bound to any of the ports of the contracting countries must be provided with a clean bill of health from the port of sailing, certified to by the consuls of the countries to which they are bound and of those at which they may touch. When the vessels sail from ports belonging to any of the contracting countries, the bill of health shall be granted by the sanitary authority of the port of departure and must always be certified to as above specified.

This bill of health shall be presented to the sanitary authority of the ports of the contracting countries at which the vessel may touch, for his certification, and shall be delivered to that of the last port of destination.

1. Consuls shall charge the proper fees for the certification of bills of health.

2. The consular visé or certification shall be entered on the back of the bill of health and authenticated with the seal of the consulate.

§ 3 When, by reason of acquired information and a thorough knowledge of the facts, the consul shall have no remarks to make as to the asseverations of the bill of health, its certification will be simple; when otherwise, the consul himself shall write down after the visé what he may deem proper to rectify the asseverations of the bill of health.

The bills of health which may be rectified, after being certified to at the first port of any of the contracting countries at which the vessel may touch, shall be accompanied by a sanitary bill, signed by the authority of the same port, in which shall be stated the treatment to which the vessel may have been subjected. The remittance of the bill shall be stated after the visé.

4. The consuls of the contracting countries at the ports of departure shall endeavor to ascertain through the local sanitary authorities, or as best they may, the sanitary condition of those ports, and in case of rectifying a bill of health, shall inform at once the sanitary authority of their country, who will forward to that of the other contracting countries the reason for the rectification.

5. If the rectifications mentioned in paragraph 3 should be made by the consuls of more than one of the contracting parties, the bill of health shall be forwarded by the sanitary authority of the first port reached by the vessel to that of the first port of the next nation, and by the corresponding authority of the latter to that of the following ports, always accompanied by the sanitary bill.

6. Vessels bound to ports of more than one of the contracting countries shall successively, at each of these, provide themselves with bills of health, and the captain must deliver all these bills to the authority of the last port of arrival.

7. The contracting countries recognize two kinds of bills of health, clean and unclean; that being clean which does not state any case of exotic pestilential disease at the port of departure or at those of relay, and unclean, that which should mention epidemics or isolated cases of the diseases referred to.

8. Men of war of friendly nations shall be granted bills of health without paying fees.

ARTICLE 11.

The contracting countries agree to appoint a corps of vessel inspectors composed of physicians paid by the respective Governments. It will be their special mission on board the vessels assigned to them to see to the compliance with the measures prescribed in behalf of the health of passengers and crews; they will also notice what may occur during the voyage and report thereon to the sanitary authority at the port of destination.

1. Vessel inspectors shall be officials of the sections of marine sanitary of their respective countries and be subordinate to their respective chiefs, whose orders and instructions they shall obey implicitly.

2. Vessel inspectors shall compete for their appointment by the Government, and it shall be the duty of the chiefs of the respective sanitary services to designate the inspectors to be placed on board.

3. The programme and purpose of the competition shall be determined by the international sanitary regulations as well as the duties and powers assigned to vessel inspectors.

ARTICLE 12.

It is agreed by the contracting countries that two kinds of quarantine shall be established at their respective ports:

- (a) A strict quarantine; and
- (b) A quarantine of observation.

1. The strict quarantine shall consist of the absolute isolation of the vessel during the time required for the sanity and disinfection of the articles infested with cholera,

yellow fever, or Eastern plague, and for the lapse of the maximum period of incubation of the pestilential disease.

2. The quarantine of observation shall consist of the absolute isolation of the vessel during the time required to make on board a visit of sanitary inspection, and for the lapse of the maximum period of incubation of the pestilential exotic disease, in case that the vessel has been at sea less than eight days for cholera, less than ten for yellow fever, and less than twenty for the Eastern plague.

3. The strict quarantine shall be applied—

1. To infected vessels;

2. To vessels on board of which cases of diseases not specified may have occurred which the sanitary visit has not made known; and

3. To vessels hailing from ports where one of the pestilential diseases exists, if they have not complied with the sanitary regulations required at the port of departure, and during the voyage, even should they not have had on board a case of pestilential disease, either real or suspicious.

4. The duration of the strict quarantine shall be determined by the maximum incubation of the pestilential disease guarded against, eight days being assigned for Asiatic cholera, ten days for yellow fever, and twenty days for the Eastern plague.

This duration may be computed in two ways:

1. Counting from the date of the termination by death or cure of the last case which has occurred on board during the voyage; and

2. Counting from the date of the landing of the passengers at the quarantine hospital.

5. The strict quarantine shall begin from the date by death or cure of the last case occurring on board during the voyage, when:

(a) The vessel belongs to the first class.

(b) A vessel sanitary inspector coming on board should certify to the precise date of the last case, to the compliance with all the measures for disinfection prescribed in the instructions which the same inspector may have received from the chief of the sanitary service, and to the present perfect state of health on board.

In either case that which is prescribed in this paragraph can not take place unless the sanitary authority shall verify the correctness of the information furnished.

6. If, after the termination of the last case occurring on board, the duration of the voyage should be equal to or greater than the maximum incubation of the pestilential disease, the vessel shall be subjected to a quarantine of observation of 48 hours.

7. If the time elapsed since the last case of pestilential disease should be less than that assigned to the maximum incubation and the vessel should belong to the first class the latter shall not be admitted to free intercourse until after a quarantine of observation, which shall last as many days as may be required to complete the aforesaid term of maximum incubation. If the voyage, after the termination of the last case, should have lasted until the day before the last of the maximum incubation of the pestilential disease which it is desired to guard against, the vessel shall not be allowed free intercourse until 48 hours shall have elapsed after the expiration of the said maximum incubation. This quarantine shall be kept by the passengers at the quarantine hospital, unless there should be no accommodation in the latter, in which case it may be allowed on board.

8. If, at the time of its arrival, there should be in the vessel cases of pestilential disease they shall be transferred to the floating hospital and the passengers subjected to a quarantine at the quarantine hospital. In this case the quarantine will commence the day of the admission of the passengers to the quarantine hospital.

The vessel and the cargo shall be ventilated and disinfected in conformity with the rules to be prescribed by the international sanitary regulations.

9. Vessels of the second class shall be subjected to the requirements of the preceding paragraph when they shall have had cases of pestilential diseases, even when they do not exist at the time of their arrival.

10. Suspicious vessels, the voyage of which may have lasted a period of time shorter than that of the maximum incubation of the pestilential disease to be guarded against, shall not be admitted to free intercourse until they shall have passed a quarantine of observation, which must last as many days as may be required to complete the term of maximum incubation. If the voyage should have lasted until the day before the last of the maximum incubation of the pestilential disease, they shall not be admitted to free intercourse until after 48 hours after having completed the aforesaid term in case they should hail from an infected port, and after 24 hours in other cases.

11. Suspicious vessels which may perform their voyage in a period of time longer than the maximum incubation of the pestilential disease to be guarded against shall be admitted to free intercourse after a quarantine of observation of 48 hours, if they proceed from infected ports, and of 24 hours in other cases.

During this quarantine the investigations prescribed by the international sanitary regulations shall be carried out.

ARTICLE 13.

The declaration of infected, as applied to a port, shall cause the sanitary interdiction of vessels hailing therefrom which may have sailed during the period immediately preceding the date of said declaration, being twenty days for the Eastern plague, ten or the yellow fever, and eight for the Asiatic cholera.

ARTICLE 14.

The declaration of the termination of the epidemic at a port shall not cause the sanitary interdiction of the vessels hailing from it to be dispensed with until twenty days shall have elapsed for the eastern plague, ten for the yellow fever, and eight for Asiatic cholera.

ARTICLE 15.

The rules prescribed for maritime ports shall apply to river ports harboring sea-going vessels.

ARTICLE 16.

The sanitary measures which the contracting countries may adopt within their own territory do not come within the scope of the present convention.

ARTICLE 17.

Should the contracting countries decide to establish international sanitary cordons, they bind themselves not to detain passengers for any longer period than that of the maximum incubation of the pestilential disease to be guarded against, and to establish the quarantine hospitals which may be required in order that the quarantines may be kept therein, the latter being governed by the same regulations prescribed for maritime quarantines so far as they may be applicable thereto.

JULIO RODRIGUEZ, *Delegate from Bolivia.*

ANDRÉS S. MUÑOZ, *Delegate from Bolivia.*

FREDERICO PUGA BORNE, *Delegate from Chile.*

CELSE BAMBAREN, *Delegate from Ecuador.*

FRANCISCO ROSAS, *Delegate from Peru.*

J. LINO ALARCO, *Delegate from Peru.*

JOSÉ MARIANO MACEDO, *Delegate from Peru.*

LIMA, March 12, 1888.

Correct:

ANDRÉS S. MUÑOZ,
Secretary to the Congress



INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

ON

CUSTOMS REGULATIONS.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State relative to certain recommendations of the International American Conference.

JUNE 2, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

The International American Conference, recently in session at this capital, recommended for adoption by the several American Republics :

1. A uniform system of customs regulations for the classification and valuation of imported merchandise.
2. A uniform nomenclature for the description of articles of merchandise imported and exported ; and
3. The establishment at Washington of an International Bureau of Information.

The Conference also, at its final session, decided to establish in the city of Washington, as a fitting memorial of its meeting, a Latin-American Library, to be formed by contributions from the several nations of historical, geographical, and literary works, maps, manuscripts, and official documents relating to the history and civilization of America, and expressed a desire that the Government of the United States should provide a suitable building for the shelter of such a library, to be solemnly dedicated upon the four-hundredth anniversary of the discovery of America.

The importance of these suggestions is fully set forth in the letter of the Secretary of State, and the accompanying documents herewith transmitted, to which I invite your attention.

BENJ. HARRISON.

EXECUTIVE MANSION,
June 2, 1890.

CUSTOMS REGULATIONS AND BUREAU OF INFORMATION.

DEPARTMENT OF STATE,
Washington, May 14, 1890.

The PRESIDENT :

The act of Congress authorizing the International American Conference, recently in session at this capital, provided that, among other subjects, it should—

consider the establishment of a uniform system of customs regulations in each of the independent American States, to govern the made of importation and exportation of merchandise, and port dues and charges, a uniform method of determining the the classification and valuation of such merchandise in the ports of each country, and a uniform system of invoices.

The Conference received from the committee intrusted with this branch of its investigation three reports, all of which were unanimously adopted, and copies are hereto attached. The action of the Conference in this respect is of great importance to all merchants and manufacturers of the United States who have commercial relations with Latin America and are endeavoring to extend their trade, as its recommendations, if adopted by the several Governments, will so simplify the formalities to be observed in the importation and exportation of merchandise that the obstacles heretofore existing will be removed.

This report, which was prepared after repeated consultation with the custom-house officials in New York and representatives of the Treasury Department, will be found in detail and ready for the consideration of Congress.

Another serious difficulty met with in our inter-American commerce has been the lack of uniformity in the nomenclature of articles of merchandise in common use, each country having its local terms and idioms that are obsolete, or at least unfamiliar, to its neighbors. For example, a calico print is known by a different name in nearly every one of the Latin-American States, and the same term used in one market may describe an entirely different article in another. This has been the source of great confusion and annoyance to those engaged in the export trade, and the Conference has proposed as a remedy the compilation and publication of a code of common nomenclature, which shall designate in alphabetical order and equivalent terms, in English, Spanish, and Portuguese, the commodities upon which import duties are levied, to be adopted by all the American nations, and to be used in shipping manifests, consular invoices, entries, clearance petitions, and other official documents.

It is suggested that the preparation of this code be done under the direction of the proposed commercial bureau of the American republics referred to below, that the work be commenced at the earliest date practicable, for which an appropriation by Congress will be necessary.

The third report of the Committee on Customs Regulations, which was prepared by the direction of the Conference, and unanimously adopted, recommends the organization of an association under the title of "The International Union of American Republics, for the prompt collection and distribution of commercial information."

This union is to be represented at Washington, under the supervision of the Secretary of State, by a bureau called "The Commercial Bureau of the American Republics," and its organ is to be a publication entitled "The Bulletin of the Commercial Bureau of the American Republics," to be printed in the English, Spanish, and Portuguese languages,

and to contain, in addition to important information concerning the American republics, the following:

(a) The existing customs tariffs of the several countries belonging to the union and all changes of the same as they occur, with such explanations as may be deemed useful.

(b) All official regulations which affect the entrance and clearance of vessels and the importation and exportation of merchandise in the ports of the represented countries; also all circulars of instruction to customs officials which relate to customs procedure, or to the classification of merchandise for duty.

(c) Ample quotations from commercial and parcel-post treaties between any of the American republics.

(d) Important statistics of external commerce and domestic products and other information of special interest to merchants and shippers of the represented countries.

This bureau is at all times to be available as a medium of communication and correspondence for persons applying for information in regard to matters pertaining to the commerce of the American republics, and the Bulletin is to be supplied to the public.

The expense of sustaining the proposed bureau and its publications is to be divided among the several American republics in shares proportionate to their respective populations.

No one familiar with the conditions of our commerce with Latin America will fail to recognize the advantages of such an organization, and if it shall please Congress to approve the project, I suggest the importance of prompt action in making the appropriations required to carry the recommendation of the Conference into effect.

It seems fitting in this connection to refer to the action of the Conference at its final session, concerning the establishment at Washington of a Memorial Library of American Literature.

The foreign delegates, appreciating the importance of the Conference and the significance of the assemblage of representatives of eighteen nations for the purpose of promoting the peace and prosperity of each other, frequently expressed a desire to erect some monument or memorial to permanently commemorate such an unprecedented event. Various propositions were suggested, but this desire finally found formal expression in the following resolution, offered by the Hon. Carlos Martinez Silva, a delegate from the Republic of Colombia:

Resolved, That there be established at such location in the city of Washington as the Government of the United States may designate, to commemorate the meeting of the International American Conference, a Latin-American Memorial Library, to be formed by contributions from all the Governments represented in this Conference, wherein shall be collected all the historical, geographical, and literary works, maps, manuscripts, and official documents relating to the history and civilization of America, such library to be solemnly dedicated on the day on which the United States celebrates the Fourth Centennial of the discovery of America.

The Hon. Bolet Peraza, a Delegate from Venezuela, after applauding and supporting Mr. Martinez Silva's resolution, suggested that the library should be named in honor of Columbus, which amendment Mr. Silva accepted.

The resolution was unanimously adopted.

Dr. Martinez Silva, in presenting his resolution, said:

Mr. President, ever since my distinguished colleague, Mr. Mendonça, spoke, at a private gathering, of the appropriateness and expediency of erecting a monument to commemorate the assembling of the International American Conference, the honorable Delegates seem to have been unanimously of the opinion that something of the sort ought to be done. But it has since occurred to me that, among the various em-

barrassments which would be encountered in the attempt to carry out the suggestion, it would be very difficult to select a model which all would accept; and that discussions and delays would arise—discussions and delays which might at last lead to that worst result, that nothing should be done.

With this fear in my mind, and thinking, furthermore, that the memorial to be erected ought to be something at once useful and made up of various elements, to which each Government might contribute independently, it occurred to me that the only plan which would satisfy all these requirements, was the establishment in Washington of a memorial library, to which each Government could send on its own account the most complete collection possible of historical, literary, and geographical works, laws, official reports, maps, etc., so that the results of the intellectual and scientific labor in all America might be collected together under a single roof.

That would be a monument more lasting and more noble than any in bronze or marble, because, in the first place, such a memorial would redound to our honor and help to make the Spanish-American nations known; while at the same time it would be very agreeable to the United States to have erected in Washington the library which I propose. It will gradually be enriched and enlarged, day by day, because the several Governments will take care to transmit every new work which may be published in their respective countries, until at last it will become so complete a collection that whoever shall desire to pursue any study concerning America will come to Washington to do it; even from Europe itself students would have to come for any special study concerning these countries. We are so disconnected in America, there are so many difficulties in the way of communication, that it may be said that we do not know each other. It is, for instance, almost impossible in Bogota to procure a book published in the Argentine Republic, and I believe that the same is the case in the Argentine Republic respecting the publications of Bogota. Let us suppose that a person is desirous of writing on America; how could he collect data as correct and complete as the case demands? He would have to go from country to country, spending much money and time to attain his object; but if there be a library such as I propose, then all those dedicating themselves to such research or in need of data can come here and find what they want.

Catalogues of this library would be distributed in all the countries of America and Europe, so that the people of all parts of the world would know what could here be obtained. It would be, moreover, of great usefulness for the permanent Spanish-American Legations in Washington. All of the honorable Delegates may have had occasion to note that great difficulties have presented themselves each time that information or a book respecting our countries is needed here.

It would also be of great value to the Government of the United States, for it would stimulate the study of those nations in this country. So that my idea reduces itself to the establishment, in Washington, in some building or apartment which could be provided by the Government of the United States, of a Portuguese-Spanish-American library, each Government sending a collection, as complete as possible, of geographical charts, historical, statistical, and literary works, etc., enriching this library from year to year with the new publications which may be issued by the American nations. At the outset we might collect here fifteen or twenty thousand volumes, but in the course of twenty years this library will have an importance unrivaled in the world.

I would desire to propose, also, that each Government should send its share of books in time for the library to be publicly dedicated on the anniversary of the discovery of America.

I most cordially indorse all that was said by the honorable Delegate from Colombia with reference to the importance and appropriateness of the proposed memorial, and have full confidence that the sentiments which he uttered, and which were shared by all his colleagues, are heartily reciprocated by the people of the United States.

To receive and protect the proposed collection it will be necessary to provide a safe and suitable building, in a convenient locality, which may also be used for the offices of the proposed bureau of information, and should contain a hall or assembly room for the accommodation of such international bodies as the two conferences that have just adjourned. I respectfully suggest that the authority of Congress be asked to purchase, or erect, a structure of appropriate design and dimensions at a cost not exceeding \$250,000.

Respectfully submitted.

JAMES G. BLAINE.

[International American Conference.]

REPORTS OF THE COMMITTEE ON CUSTOMS REGULATIONS.

(As adopted by the Conference.)

I.—CLASSIFICATION AND VALUATION OF MERCHANDISE.

The Committee on "Customs Regulations," appointed by resolution passed at the sitting of the twelfth day, has the honor to submit the following report. The subjects designated for consideration by this committee, as appears in the printed minutes of the Conference, are the following:

- A.—Formalities to be observed in the importation and exportation of merchandise.
- B.—The classification, examination, and valuation of merchandise.
- C.—Methods of imposing fines and penalties for the violation of customs and harbor regulations.

The committee has already made a preliminary report to the Conference, recommending the adoption of a plan for the assistance of importers and exporters by means of an official and uniform nomenclature and classification of merchandise, in alphabetical order, which is intended to furnish equivalents in the English, Spanish, and Portuguese languages.

In continuation of its labors, the committee now presents the following suggestions:

A.—Importation and exportation of merchandise.

1. The committee has not been authorized to take into consideration the varying rates of duties imposed upon exports and imports by the countries represented in the Conference, and such recommendations as are made in this report are intended to be applicable alike to the present and the future rates of duty.

2. The committee has given due weight to the fact that each of the countries represented depends upon customs duties as the chief source of national revenue, and that the productiveness and security of this revenue must not be threatened nor impaired under the guise of simplification or improvement of regulations for its collection.

3. It is recognized that each country should regulate and administer its own system of customs revenue, and that differences of race, habit, condition, and environment prevail among the conferring nations. The committee, therefore, proposes nothing that does not take cognizance of these important considerations.

4. The committee realizes that an active and desirable international commerce can be established only by the energy and skill of private enterprise, and can not be created and maintained by the cultivation of mutual sentiments of amity and good will. The true bases of such intercourse can be found only in parallelism of interests and in satisfactory profits derived from the supply of material wants.

5. Convinced that an increased commerce amongst the American republics would be mutually beneficial to the citizens of those republics the committee has considered the customs regulations of the several countries for the purpose of devising means of reducing some of the existing burdens of labor, time, expense, and risk.

6. The committee is gratified to find that, in a general sense, the revenue laws and regulations of the several republics are reasonable and moderate in their provisions; that their administration is, upon the

whole, considerate of the rights and interests of the citizen, and that as a rule those who conduct the international navigation and commerce of the American continent are candid and honest in their relations with the revenue laws.

7. Nevertheless it is apparent that the laws and regulations as well as the administration thereof are, in some respects, susceptible of important improvements, and it is proposed in part to effect these improvements by establishing certain uniform rules and practices, without attempting to regulate minor local details.

8. Commerce is now carried on mainly by the instrumentality of the steamship, the railway, and the telegraph. These agencies have created necessities and conditions which often conflict with administrative arrangements which are preserved only because they are traditional, and which do not accord with modern methods.

9. Excessive formality in administration is a serious evil, for the reason that it introduces expense, risk, and uncertainty in commercial transactions in such degree as to discourage commercial enterprise. It leads to the multiplication of agents in the business of importation, exportation, and transportation, and thereby reduces the legitimate profits and reasonable expectations of merchants and carriers, and increases the expenses of Government.

10. A ship's manifest is a marine document universally required of vessels arriving from foreign ports, as a basis for determining their cargoes and, in the time of war, to furnish the evidence of non-contraband goods. No vessel should be allowed to clear from any customs port before the master has lodged in the custom-house a manifest of his cargo, but consular certification of such manifests should not be required. Vessels belonging to regular lines of steamers which are advertised to sail on schedule time are usually compelled to take in cargo up to the last moment of their departure, and it is therefore impracticable before the hour of sailing to complete the manifest for clearance at the custom-house. The resident agents of such vessels should therefore be allowed to lodge in the custom-house, within twenty-four hours after the sailing of the vessel, such supplementary manifests as may be required to account for the whole cargo.

Before entering a foreign port the master of every vessel should prepare, for surrender to the customs authorities, an inward manifest containing all the facts shown by the outward manifests, together with a list of the passengers and crew and an account of surplus ship stores remaining on board. This manifest should be lodged at the custom-house together with the register and any other documents required by the local regulations, and should be verified by the master's personal declaration before the proper customs officer. The inward manifest may be used in verifying the cargo, but should not be accepted in lieu of an invoice. The committee will present for the consideration of the Conference a proposed international form of manifest and supplementary manifest. On the exportation of merchandise every shipper should be required, under penalty for failure, to lodge at the custom-house a special manifest of the goods sent by him out of the country, containing full particulars respecting the character, quality, value, and destination of the goods, so that the Governments may have authentic data for statistical records and reports. (See Recommendation 1.)

11. Invoices for customs purposes should be made out in the language of either the country of import or of export, and should declare the whole-sale market value of the goods at the date of exportation in the market whence imported, and all amounts or quantities should be expressed in

figures only. The value so declared should be accepted, *prima facie*, as a basis for estimating ad valorem duties. It is recommended that the fee for consular certification throughout republican America be established at the uniform rate of \$2.50 for each invoice; but that no fee be required for duplicates of an original invoice, nor in any case where the value does not exceed \$100. (Rec. 2.)

12. Entries of imported merchandise should be made out in the language of the country of importation, and should name the vessel and the importer; entries should agree with bills of lading and with invoices in all material particulars, and the bill of lading and invoice should be lodged with the customs authorities at the time of entry. In case any of the packages covered by an invoice should fail to arrive by reason of short shipment, entry should be allowed of the missing packages by means of a properly verified extract or copy of the original invoice. Wherever oaths are now required in customs procedure they should be abolished, because they entail needless hardship and loss of time upon the importer in requiring his personal attendance at the custom house. The signature of the importer to his declaration for entry should be invested with all the penal responsibilities now attached to his affidavit. (Rec. 3.)

13. Special facilities without the imposition of unnecessary charges should be accorded to goods in transit by railroad or water transportation through one country to another, provided they be kept in bond during such transit and that the transit be made under the supervision of the customs authorities, but without any verification of contents of packages. (Rec. 4.)

14. The hours and regulations for the lading and unlading of vessels should be made as liberal as local circumstances will permit, and special means should be provided for their entrance and clearance before and after the regular hours for business at the custom-house, and on all days when general business is suspended. (Rec. 6.)

15. The abolition of all fees and charges in the customs service is desirable and none should be exacted except such as are fixed and published by due authority; whenever they do exist, they should be limited to the actual cost of the service rendered, and never be imposed for the purpose of raising public revenue. (Rec. 7.)

16. In cases where the rate or amount of duty is doubtful or disputed the importer should be permitted to deposit, under protest, the amount claimed by the customs authorities and to take possession of his goods; his duties should be liquidated, as promptly as practicable, in accordance with the final decision on his protest, and any excess of deposit refunded without abatement. (Rec. 8.)

17. The committee earnestly recommends the adoption, in the principal ports of the countries here represented, of a system of bonded warehouses similar to that which wherever it has been tried has demonstrated its convenience to importers and its advantage to the national revenue. By availing himself of this system the importer can delay the payment of duties until he has effected the sale of the articles imported, or if he prefers to export them, he can do so without payment of duty. To secure this privilege he must store the imported merchandise at his own risk and expense in some designated warehouse which is kept under the special supervision of the collector of customs, and must furnish satisfactory bonds for the payment of the duty or the exportation of the merchandise within a prescribed period. The importer, under this system, may withdraw his goods in lots of one or more packages, or if the merchandise be in bulk, in stated quantities

according to the demands of his business upon paying all duties and costs of labor and storage which have accrued upon the portion withdrawn for consumption.

The government is thus absolutely protected against loss while the importer is relieved from the necessity of forcing his goods upon an unsatisfactory market. (Rec. 9.)

18. Peculiar hardship is suffered by importers in some of the countries from the revision of invoices by the supreme authority at the capital. In case of doubt or controversy, where a deposit of the maximum duty is exacted and the amount is paid under protest, this revision by the central authorities is necessary in the interest of justice, but in all other cases, except where fraud or culpable negligence appears, the merchant, upon paying the assessed duty at the custom-house, should receive his goods exempted from further liability for reclamations which may absorb his apparent profits. (Rec. 15.)

19. Internal duties upon imported commodities which have paid duty at the frontier are intolerable burdens upon and obstructions to international commerce. As soon as the legally assessed import duties are paid, on arrival, the goods become a part of the general stock of commodities and should thereafter be treated in the same manner as domestic products. An increase of import duties at the frontier is preferable to the vexatious system of internal duties. There should be no interior control nor supervision of duty-paid imported goods. A custom-house delivery of goods should entitle them to all the privileges and exemptions accorded to domestic merchandise. (Rec. 15.)

20. In the general interest of the American peoples, it is urged that prompt information be circulated by the governments of the outbreak or prevalence of contagious diseases among cattle or other live-stock, in order that such importations may be subjected to a proper quarantine.

B.—*The classification, examination, and valuation of merchandise.*

21. With regard to the customs examination of merchandise, it need only be said that it should be conducted with as little delay, expense, and damage as possible, and should be limited to a reasonable verification of the statements of the entry and invoice. This suggestion applies as well to examinations conducted for the purpose of verifying the dutiable value of ad valorem merchandise as to examinations for ascertaining weights and quantities for the assessment of specific duty. The committee has interpreted the phrase "valuation of merchandise" as meaning its invoice valuation, and where duties are specific this valuation should be received without question or the necessity of verification, except in case of suspected fraud. (Rec. 10.)

22. Merchandise contained in the baggage of tourists and immigrants, not exceeding a limited amount, should be admitted to entry and payment of duties without bill of lading or invoice, and tools of trade or occupation and other articles brought by passengers in reasonable quantities, for their own personal use and not for sale, should be exempted from duty. (Rec. 11.)

23. Actual samples of merchandise consigned, in reasonable quantities, solely for inspection, or contained in the baggage of bona fide commercial travelers and intended to be used in the prosecution of their business, should, in the interests of commerce, be admitted duty free, under such restrictions as may be deemed necessary. (Rec. 11.)

24. The system of appraisement for ad valorem duties is so intricate and

voluminous in its details, and is so little likely to be practiced *in extenso* by many of the countries represented in the Conference, that the committee has decided not to recommend the consideration of that system.

25. The assessment of duty upon the gross weight of dutiable products seems onerous, but where the rate has been adjusted with due regard to the insignificant value of the taxed materials used for packing any particular class of goods, the duty upon the "gross weight" has the great advantage of certainty and simplicity and avoids troublesome questions about tare and weight. Through carefulness in packing and the use of light, strong coverings, importers can minimize the tax. Whenever "net weight" is required the tares should be regulated, as far as practicable, by schedules officially prepared and published. (Rec., 16.)

26. Merchandise which has been recovered from a wrecked or stranded vessel should be allowed to be entered without invoice at the custom-house by either the salvors or importers for appraisement by the proper authorities, duties to be paid on the appraised value. The importers should also be accorded the privilege of abandoning to the Government merchandise included in any invoice and seriously damaged by sea transportation free of liability for duty, provided such merchandise represents 10 per centum of the total value of the invoice, and whenever goods have been surrendered to the insurance companies the latter should be recognized as rightful owners of the same for all customs purposes. (Rec., 13.)

C.—*Methods of imposing fines and penalties.*

27. Against the imposition of fines and excessive duties there should be granted the right of appeal to some tribunal which would promptly investigate all the facts and take into account the good or bad faith of the importer, as may appear in evidence. The importer should be allowed to appear personally or by representative before such tribunal and the decision should in such cases be made without delay. Clerical errors, minor inaccuracies, and informalities in the entry or invoice or in any customs proceedings which do not affect the amount of collectible duty, should not, in themselves, be deemed sufficient ground for imposing fines and penalties. (Rec., 17.)

28. The committee is deeply impressed with the belief that equity and regularity of administration are in constant danger of infraction whenever officers of customs are allowed to participate in any share of penalties or forfeitures. A pecuniary interest in fines and penalties has a tendency to bias the judgment of the officer and incline him toward undue exactions for his own benefit. The committee therefore recommends to all the countries represented the adoption of laws (where they do not already exist) providing for the deposit in the Government Treasury of all the moneys received by customs officers, and the substitution of a system of rewards for specially meritorious service. (Rec., 17.)

D.—*Additional suggestions.*

29. The committee has been convinced of the advantages to be derived from a periodical compilation, publication, and distribution of official statistics of the navigation and foreign commerce of the countries represented in the Conference. These statistics are often the indispensable bases for legislative enactments affecting international interests. (Rec., 18.)

30. In addition to the adoption of common statistical forms, the committee recommends the establishment of an international bureau for the systematic collection and distribution of useful information relating to the exterior navigation and commerce of the conferring powers, and to the changes in their customs laws and regulations.

The expense of maintaining such a bureau would be inconsiderable and its benefits inestimable. As one example of the practicability and economy of such a bureau, the bureau of universal postal union, conducted by the Government of Switzerland, may be cited. A more cognate instance is to be found in the plan for an international union for the publication of customs tariffs, etc., formulated by the conference held at Brussels in May, 1888, in which most of the commercial nations of the globe were represented, and it is urged that a union be effected between the Republics represented in this Conference, which would insure a prompt and accurate publication, at the common expense, for the common benefit, of important commercial information. To accomplish this purpose the proposed international bureau might with advantage be maintained under the supervision of one of the represented countries and charged with the translation into English, Spanish, and Portuguese, and the publication and distribution of all the American tariffs, and such modifications of the same as may occur in due course. The countries comprised in this Conference should each engage to send to the bureau without delay copies of—

- (1) Their representative customs laws, including tariffs corrected to date.
- (2) Explanations of the effect of modifications which are made in the original laws.
- (3) All circulars of instruction which have been addressed to their respective customs officers concerning the exaction of duties on, and the classification of, merchandise under the tariff laws.
- (4) All commercial and parcel post treaties in force or subsequently adopted.
- (5) All available statistics relating to external commerce and domestic productions.

The annual expense of maintenance would properly be assessed in due proportion to the amount of the foreign commerce of the countries interested.

A common form adapted to the uniform exhibition of the desired facts will, if desired by the Conference, be prepared and submitted hereafter. (Rec., 18.)

MEASURES RECOMMENDED.

In accordance with the conclusions thus carefully set forth, your committee asks the Conference to recommend to all the countries here represented the adoption of the following measures:

(1) That forms be adopted for outward manifests of vessels, which shall be lodged at the custom-house by masters of vessels at the time of clearance, and for supplementary manifests of steamers belonging to established lines to be made by the resident agents thereof and lodged by them in the custom-house within twenty-four hours after the sailing of the vessels, which manifests shall be used only for the determination of the cargo, etc., and shall not require consular certification.

That every such manifest shall show the name of the vessel and of her master, the ports of departure and destination, a description of her cargo by marks, numbers, and supposed contents of packages, with names of consignees and consignors, but no statement of values.

On the exportation of merchandise each individual shipper shall make and lodge at the custom-house for statistical purposes a special manifest, stating quantities, character, and values of the goods exported by him; and for a failure so to do he shall be subjected to a penalty.

The master of any vessel may, within forty-eight hours after the entrance at the custom-house and before any of the cargo shall have been landed, change her destination and proceed on his voyage. On entering a foreign port the master of every vessel belonging to one of the represented countries shall lodge with the custom authorities an inward manifest, containing all the facts shown by the outward manifest, including a list of the passengers and crew and an account of surplus ship stores remaining on board. This manifest must be verified by the master's personal declaration at the custom-house. It shall not be accepted in lieu of an invoice and no consular certification shall be required. Forms for outward, inward, and shipper's manifests are herewith submitted.

With a view that each government shall have official record of its export trade by rail with adjoining countries, any persons delivering to a railway or other transportation company commodities for export to an adjoining country, shall also deliver a manifest thereof, showing the kind, quantity, and value of such commodities; and this manifest shall be delivered to the customs officer of the exporting country nearest to the borders thereof.

2. For the entry of imported merchandise, invoices shall be made out in the language and currency of either the country of import or of export, or in any currency actually paid for the merchandise. They must declare the contents and value of each package, and state the quantities and the values of the goods in figures and not in words, and the amounts so expressed, with any additions which the importer may make in his entry, shall be accepted at the custom-house as the basis for preliminary estimates of duty.

Wherever consular certification of manifests has heretofore been required the certification of invoices shall be accepted in lieu of the same. The consul's fee for legalization and certification shall be fixed at the uniform rate of \$2.50 for each invoice, but no fee shall be required for duplicates of an original invoice, nor for any invoice the value of which does not exceed \$100; provided that such invoice shall not have been subdivided for the purpose of reducing its total value.

If, by the reason of delay in the mails or other satisfactory cause, a certified invoice can not be produced, entry shall be allowed on a statement in the form of an invoice, and when the amount exceeds \$100 the execution of a bond shall be required for the subsequent production of an invoice duly certified.

In case any of the packages covered by an invoice shall, by reason of short shipment, fail to arrive, entry may subsequently be made of the missing packages by means of a properly verified extract or copy of the original invoice. (Par. 11.)

3. That all imported merchandise shall be entered at the port of arrival on a prescribed form, which shall be a declaration or petition signed by the importer and giving the ship's name, port of departure and date of arrival, the particulars of the packages, including the weight or quantity and the supposed dutiable or free class of contents; also their values expressed in the currency of the invoice and reduced to the currency of the country of importation. The entry must agree in all essentials with the invoice and the bill of lading. That in all proceed-

ings relating to the importation and entry of merchandise the declaration of the importer over his signature shall be received in lieu of his oath, and that any false declaration so signed shall subject him to such penalties as may be provided by the respective countries. (Par. 12.)

4. That every reasonable facility shall be afforded for the unobstructed transit of merchandise through one country to an adjacent country, especially where transportation can be directly affected by railway or water routes and where bonds can be furnished for the delivery of such merchandise, intact, within the jurisdiction of the adjoining country. That in no case shall the contents of such packages be made subject to duty or to examination by custom officers while in transit, or to any onerous requirements and exactions, but they shall be held amenable to such supervision only as shall be incidental to proper safeguards against their unlawful introduction into the markets of the country through which they may be transported. (Par. 13.)

5. That technical defects in the form of any document which has been duly authenticated before the consul of any one of the countries shall not, in that country, be deemed sufficient cause for the imposition of fines or penalties, and that all other manifest clerical errors may be corrected, after entry at the custom-house, without prejudice to the consignee or the owner. (Par. 9.)

6. That every facility shall be granted in the various ports of entry for the entrance and clearance of vessels and the discharge and lading of cargoes; and, on all days when other official business may be suspended, that the custom-house shall be open during some part of each day, for the prompt entrance and clearance of vessels. (Par. 14.)

7. That the scale of duties shall be so arranged as to avoid the necessity of additional fees and charges, and that every country in which they continue to be exacted shall establish and publish a list of all fees and charges which are statutory in its ports, and that such exactions shall be respectively adjusted, so far as it is practicable, to cover the actual cost of the service rendered therefor. (Par. 15.)

8. That in all cases of dispute as to the legal rate or amount of duty, the importer shall be allowed to deposit under protest the maximum duty demanded by the customs authorities and to take possession of his goods; the entry in such cases to be liquidated as promptly as practicable after the final decision is reached, and the excess of duty (if any) refunded to the importer. (Par. 16.)

9. That in the principal ports of the countries here represented, a system shall be adopted as soon as practicable, whereby an importer who desires to place his importation temporarily in the custody of the Government before payment of duty shall be enabled to store it at his own expense and risk, under the supervision of the customs authorities. For this purpose, warehouses shall be provided in which such goods may remain on storage under bond during one or more years, and from which they may be withdrawn at any time by the importer, in quantities of not less than one package, or if in bulk, not less than one ton in weight, upon payment of the duty and charges upon the portion withdrawn for consumption, or, if withdrawn for export, upon payment of the expenses of storage and labor. (Par. 17.)

10. That customs examinations shall be made solely for the verification of the declarations of the invoice and entry, and be conducted with the least possible delay and expense to the importer. Where the duties are specific, the invoice valuation shall be accepted for statistical purposes without verification. (Par. 21.)

11. That actual samples of merchandise of no commercial value sent by foreign dealers, or brought by bona fide commercial travelers, solely for inspection, and personal effects and tools of trade or occupation, brought by passengers for their own use and not for sale, shall be admitted without payment of duty, under such restrictions as may be provided. (Par. 22.)

12. That the countries here represented shall agree to circulate prompt information of the existence, within their respective borders, of contagious disease among cattle and other live-stock, and to establish proper precautions where importations of this character are threatened. (Par. 20.)

13. Merchandise which has been recovered from a wrecked or stranded vessel may be entered without invoice at the custom-house by either the salvors or the importers for appraisement by the proper authorities, and duties shall be paid in accordance with such appraisement. Importers shall also be accorded the privilege of abandoning to the Government, without liability for duty, any damaged merchandise included in any invoice, provided that the portion so abandoned shall amount in value or quantity to ten per centum of the entire invoice, and whenever recovered goods have been surrendered to an insurance company, the latter shall be recognized as the rightful owner of the same for all customs purposes. (Par. 26.)

14. That when importers have paid at the frontier the full amount of import duties assessed, they shall be exempted from all further liability for duties within the limits of the country of importation. (Par. 18, 19.)

15. That where the rate or amount of duties is dependent upon the weight, gross weight shall generally be used, and that in case net weight is required, allowances for tare shall be made according to schedules officially published. (Par. 25.)

16. Against the imposition of fines or excessive duties importers shall be granted the right of appeal to a tribunal by which their good or bad faith, as it may appear from the evidence, will be taken into account; and the decision of said tribunal upon the facts shall be final and shall be made as promptly as practicable, and whenever the good faith of the importer is satisfactorily shown no penalty shall be incurred. Customs officers shall have no participation in any of the customs receipts, but shall deposit them intact, including moneys derived from fines and forfeitures, into the treasuries of their respective governments. (Par. 27, 28.)

17. That the governments here represented shall unite for the establishment of an American international bureau for the collection, tabulation, and publication, in the English, Spanish, and Portuguese languages, of information as to the productions and commerce, and as to the customs laws and regulations of their respective countries; such bureau to be maintained in one of the countries for the common benefit and at the common expense, and to furnish to all the other countries represented, such commercial statistics and other useful information as may be contributed to it by any of the American republics.

That the Committee on Customs be authorized and instructed to furnish to the Conference a plan of organization and a scheme for the practical work of the proposed bureau. (Par. 29, 30.)

18. The acceptance of the foregoing recommendations shall not require any change in the present legislation of the American republics, in case it should contain more liberal provisions than here proposed, as

the purpose of the Conference is not only to adopt uniform rules, but to establish more liberal provisions than are now in force.

J. ALFONSO.

M. ROMERO.

CLÍMACO CALDERÓN.

CHAS. R. FLINT.

SALVADOR DE MENDONÇA.

MANUEL ARAGÓN.

N. BOLET PERAZA.

H. G. DAVIS.

II.—BUREAU OF INFORMATION.

At the meeting of the Conference, held March 29, 1890, the following resolution was adopted :

That the governments here represented shall unite for the establishment of an American International Bureau for the collection, tabulation, and publication, in the English, Spanish, and Portuguese languages, of information as to the productions and commerce and as to the customs laws and regulations of their respective countries; such bureau to be maintained in one of the countries for the common benefit and at the common expense, and to furnish to all the other countries such commercial statistics and other useful information as may be contributed to it by any of the American republics. That the Committee on Customs Regulations be authorized and instructed to furnish to the Conference a plan of organization and a scheme for the practical work of the proposed bureau.

In accordance with said resolution the committee submits the following recommendations :

1. There shall be formed by the countries represented in this Conference an association under the title of "The International Union of American Republics for the prompt collection and distribution of commercial information."

2. The International Union shall be represented by a bureau to be established in the city of Washington, D. C., under the supervision of the Secretary of State of the United States and to be charged with the care of all transactions and publications and with all correspondence pertaining to the International Union.

3. This bureau shall be called "The Commercial Bureau of the American Republics," and its organ shall be a publication to be entitled "Bulletin of the Commercial Bureau of the American Republics."

4. The Bulletin shall be printed in the English, Spanish, and Portuguese languages.

5. The contents of the Bulletin shall consist of—

(a) The existing customs tariffs of the several countries belonging to the union and all changes of the same as they occur, with such explanations as may be deemed useful.

(b) All official regulations which affect the entrance and clearance of vessels and the importation and exportation of merchandise in the ports of the represented countries; also all circulars of instruction to customs officials which relate to customs procedure or to the classification of merchandise for duty.

(c) Ample quotations from commercial and parcel-post treaties between any of the American republics.

(d) Important statistics of external commerce and domestic products and other information of special interest to merchants and shippers of the represented countries.

6. In order to enable the commercial bureau to secure the utmost accuracy in the publication of the "bulletin," each country belonging to this

union shall send directly to the bureau, without delay, two copies each of all official documents which may pertain to matters having relation to the objects of the union, including customs tariffs, official circulars, international treaties or agreements, local regulations, and, so far as practical, complete statistics regarding commerce and domestic products and resources.

7. This bureau shall at all times be available as a medium of communication and correspondence for persons applying for reasonable information in regard to matters pertaining to the customs tariffs and regulations and to the commerce and navigation of the American republics.

8. The form and style of the "bulletin" shall be determined by the commercial bureau and each edition shall consist of at least one thousand copies. In order that diplomatic representatives, consular agents, boards of trade, and other preferred persons shall be promptly supplied with the "bulletin," each member of the union may furnish the bureau with addresses to which copies shall be mailed at its expense.

9. Every country belonging to the International Union shall receive its quota of each issue of the "bulletin" and the quota of each country shall be in proportion to its population.

Copies of the "bulletin" may be sold (if there be a surplus) at a price to be fixed by the bureau.

10. While it shall be required that the utmost possible care be taken to insure absolute accuracy in the publications of the bureau, the International Union will assume no pecuniary responsibility on account of errors or inaccuracies which may occur therein. A notice to this effect shall be conspicuously printed upon the first page of every successive issue of the bulletin.

11. The maximum expense to be incurred for establishing the bureau and for its annual maintenance shall be \$36,000, and the following is a detailed estimate of its organization, subject to such changes as prove desirable:

One director in charge of bureau, compensation.....	\$5,000
One secretary.....	3,000
One accountant.....	2,200
One clerk.....	1,800
One clerk and type-writer.....	1,600
One translator (Spanish and English).....	2,500
One translator (Spanish and English).....	2,000
One translator (Portuguese and English).....	2,500
One messenger.....	800
One porter.....	600
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	22,000
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Office expenses.

Rent of apartments, to contain one room for director, one room for secretary, one room for translators, one room for clerks, etc., and one room for library and archives.....	\$3,000
Lights, heat, cleaning, etc.....	500
	<hr/>
	3,500
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Publication of bulletin.

Printing, paper, and other expenses.....	\$10,000
Postage, express, and miscellaneous expenses.....	500
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	10 500

12. The Government of the United States, through the Secretary of State, to advance to the International Union a fund of \$36,000, or so much of that amount as may be required, for the expenses of the commercial bureau during its first year, and a like sum for each subsequent year of the existence of this union.

13. On the 1st day of July of the year 1891, and of each subsequent year during the continuance of this union, the director of the commercial bureau shall transmit to every government belonging to the union a statement in detail of the expenses incurred for the purposes of the union, not to exceed \$36,000, and shall assess upon each of said governments the same proportion of the total outlay as the populations of the respective countries bear to the total populations of all the countries represented in the union, and all the governments so assessed shall promptly remit to the Secretary of State of the United States, in coin or its equivalent, the amounts respectively assessed upon them by the director of the bureau. In computing the population of any of the countries of this union, the director of the bureau shall be authorized to use the latest official statistics in his possession. The first assessment to be made according to the following table:

Table of assessments for commercial bureau.

Countries.	Population.	Tax.	Countries.	Population.	Tax.
Hayti	500,000	\$187.50	Honduras	350,000	\$131.25
Nicaragua.....	200,000	75.00	Mexico.....	10,400,000	3,900.00
Peru	2,600,000	975.00	Bolivia	1,200,000	450.00
Guatemala.....	1,400,000	525.00	United States	50,150,000	18,806.00
Uruguay	600,000	225.00	Venezuela.....	2,200,000	825.00
Colombia.....	3,900,000	1,462.50	Chili	2,500,000	937.50
Argentine.....	3,900,000	1,462.50	Salvador	650,000	243.75
Costa Rica.....	200,000	75.00	Ecuador.....	1,000,000	375.00
Paraguay	250,000	93.75			
Brazil.....	14,000,000	5,250.00	Total.....	96,000,000	36,000.00

14. In order to avoid delay in the establishment of the union herein described, the Delegates assembled in this Conference will promptly communicate to their respective governments the plan of organization and of practical work adopted by the Conference, and will ask the said governments to notify the Secretary of State of the United States, through their accredited representatives at this capital or otherwise, of their adhesion or non-adhesion, as the case may be, to the terms proposed.

15. The Secretary of State of the United States is requested to organize and establish the commercial bureau as soon as practicable after a majority of the countries here represented have officially signified their consent to join the International Union.

16. Amendments and modifications of the plans of this union may be made at any time during its continuance by the vote, officially communicated to the Secretary of State of the United States, of a majority of the members of the union.

17. This union shall continue in force during a term of ten years from the date of its organization, and no country becoming a member of the union shall cease to be a member until the end of said period of ten years. Unless twelve months before the expiration of said period a majority of the members of the union shall have given to the Secretary of State of the United States official notice of their wish to terminate

the union at the end of its first period, the union shall continue to be maintained for another period of ten years and thereafter, under the same conditions, for successive periods of ten years each.

JOSÉ ALFONSO.

M. ROMERO.

N. BOLET PERAZA.

SALVADOR DE MENDONÇA.

H. G. DAVIS.

CHAS. R. FLINT.

III.—NOMENCLATURE.

MOTION.

Resolved, That the proper committee of this Conference be requested to examine and report about the convenience and practicability of adopting a common schedule of foreign goods, to be used by the several nations represented in this Conference for the purpose of collecting import duties, making invoices, bills of lading, etc., each country having the exclusive right to fix the amount of duties to be levied on each article, but the schedule of the articles to be common to all.

M. ROMERO,

Delegate from Mexico.

WASHINGTON, *January 2, 1890.*

REPORT.

The Committee on Customs Regulations has considered the resolution presented by Mr. Romero, Delegate from Mexico, with a view to the adoption by the nations represented at this Conference of a common nomenclature which shall designate in equivalent terms, in English, Spanish, and Portuguese, the commodities on which import duties are levied, and also be used in shipping manifests, consular invoices, entries, clearance petitions, and other customs documents, without restricting thereby the right of each nation to maintain the duties levied at present or to change them in any way which may be most convenient to their respective interests.

The committee favors this resolution in the belief that one of the objects for which this Conference has been convened is the assimilation of the customs laws and regulations of the American nations, in order that simplification may facilitate the mercantile operations between them and promote the development of their reciprocal trade. The committee will formulate the nomenclature contemplated in said resolution, if the occupations of the members thereof allow it, and if they are able to obtain the necessary data and expert help therefor, and if unable to do this, will report to the Conference the manner in which, in its opinion, this labor can best be performed.

This is not the only subject with which the committee has had to deal. The committee is carefully considering all the other important and complex matters which the Conference has intrusted to it, and as soon as its labors are finished it will submit them to the enlightened decision of the Conference.

While such results will be presented later, the committee now submits to the Conference the following resolution:

“Resolved, That the International American Conference recommends to the Governments represented therein the adoption of a common

nomenclature which shall designate in alphabetical order in equivalent terms, in English, Portuguese, and Spanish, the commodities on which import duties are levied, to be used respectively by all the American nations for the purpose of levying customs imposts which are or may hereafter be established, and also to be used in shipping manifests, consular invoices, entries, clearance petitions, and other customs documents; but not to affect in any manner the right of each nation to levy the import duties now in force, or which may hereafter be established."

J. ALFONSO.

CHARLES R. FLINT.

M. ROMERO.

H. G. DAVIS.

SALVADOR DE MENDONÇA.

CLÍMACO CALDERÓN.

C

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING AN

INTERNATIONAL MONETARY UNION.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State with a report of the International American Conference relating to an international monetary conference.

JULY 12, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith a letter from the Secretary of State, inclosing a copy of a report of the International American Conference, recently in session at this capital, recommending the establishment of an international American monetary union, and suggesting that the President be authorized to invite the several American nations to send delegates to its first meeting in Washington, on the first Wednesday of January next, that authority also be granted for the appointment of three delegates on the part of the United States, and that an appropriation be made to meet the necessary expenses.

I commend these suggestions and hope they will receive the prompt consideration of Congress.

BENJ. HARRISON.

EXECUTIVE MANSION, *July 12, 1890.*

DEPARTMENT OF STATE,
Washington, July 10, 1890.

THE PRESIDENT:

The International American Conference, recently in session at this capital, adopted the following report:

The International American Conference is of opinion that great advantages would accrue to the commerce between the nations of this continent by the use of a coin or coins that would be current at the same value in all the countries represented in this Conference, and therefore recommends—

(1) That an international American monetary union be established.

(2) That as a basis for this union an international coin or coins be issued which shall be uniform in weight and fineness, and which may be used in all the countries represented in this Conference.

(3) That to give full effect to this recommendation there shall meet in Washington a commission composed of one delegate or more from each nation represented in this Conference, which shall consider the quantity, the kind of currency, the uses it shall have, and the value and proportion of the international silver coin or coins, and their relations to gold.

(4) That the Government of the United States shall invite the commission to meet in Washington within a year from the date of the adjournment of this Conference.

It was hoped and expected by the Conference that the recommendations would be transmitted to Congress with a recommendation that the several nations interested be invited to send delegates to a meeting of the international American monetary union at Washington on the first Wednesday of January next; that authority be granted for the appointment of three delegates on the part of the United States, and that an appropriation be made to meet the necessary expenses.

Respectfully submitted.

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING

TREATIES

FOR THE

PROTECTION OF PATENTS AND TRADE-MARKS.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

Report of the International American Conference concerning patents, trade-marks, and copyrights.

JULY 11, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

INTERNATIONAL PATENTS AND TRADE-MARKS.

To the Senate and House of Representatives :

I transmit herewith a communication from the Secretary of State, inclosing a report of the action of the International American Conference, lately in session in this city, concerning the protection of patents, trade-marks, and copyrights in commerce between the American Republics, to which I invite your attention.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 11, 1890.

DEPARTMENT OF STATE,
Washington, July 11, 1890.

THE PRESIDENT :

The International American Conference, recently in session at this capital, was invited to consider, among other subjects, the best method of protecting the patents and trade-marks of American manufacturers against infringement and forgery ; and I have the honor to submit their conclusions for your consideration and the information of Congress.

The South American Congress which met at Montevideo in August, 1888, adopted three treaties for the protection of patents, trade-marks, and copyrights, which have already been ratified by the Argentine Republic, Bolivia, Brazil, Chili, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela—all the nations of the Southern Continent—and the recent conference recommends their ratification by the several governments of Central and North America.

Respectfully submitted.

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT ON PATENTS AND TRADE-MARKS.

To the honorable the International American Conference:

According to the invitation of the United States Government to the other governments of America, and according to the act of Congress in virtue of which that invitation was extended, one of the objects for which this conference has been called together is to concert measures for the protection of literary and artistic property, patents on inventions, and trade-marks belonging to citizens of any one of the countries represented in this Conference within the territory of each of the others of said countries.

The property of man in the fruits of his intellect, whether they consist of literary or scientific works or of works of art, is recognized by all civilized nations, receives in all the protection of the law, and in some is the object of special attention in the constitutions or fundamental laws. All the nations of America protect literary and artistic property. All have placed in their codes legal provisions, by virtue of which the author's or artist's property in his works is acknowledged and assured to the citizens of each of them and to foreigners who live under the protection of their laws; and the violation of these rights incurs the penalty of the law, and is punished in such manner as the legislation of each State determines.

The right of property in industrial products receives the same protection and the same guaranties. The person who discovers new industrial products, or invents new processes for their preparation or manufacture, or improves upon the processes already known, contributes by his discovery or invention to the development of industry and to the increase of public wealth, and has a right thereto as clear and incontrovertible under the laws of all civilized nations as that which the manufacturer has to the products of his factory or the laborer to his daily wages.

In consequence of the industrial development of the present age and the daily increase of international commercial relations very great importance has lately attached to the signs and marks employed by manufacturers to distinguish the products of their factories, and by traders to distinguish the wares which they select and place upon the market, which marks and signs are commonly called manufacturers' or dealers' trade-marks. The tradesman or merchant who wins reputation for a trade-mark by the superiority of the articles to which he attaches it acquires a right to that mark which the law should foster and protect, and it should punish those who violate this right, either by making unlawful use of or by counterfeiting or forging a mark belonging to another.

This will protect not only the maker or seller, but also the buyer, who must generally rely in selecting an article upon the trade-mark which has made it known in the market. When an accredited trade-mark is unlawfully used or forged, with the intent of giving to the market and the consumer an adulterated article of food, the deception generally assumes increased gravity; for, at the same time that the proprietor's right of ownership of the unlawfully appropriated or counterfeited mark is violated, and that the buyer, who is a victim of the

imposition, is defrauded, the health of the consumer is frequently injured and at times his death occasioned.

As a general rule, the laws relating to literary, artistic, and industrial property protect in each country only the proprietor who is a citizen or resident of the country itself, and tacitly permit the violation of similar rights of property guaranteed by the laws of other nations within their own territories. Even in countries where the movable property of a foreigner is protected from the moment he enters the national territory, and where the property of an absent foreigner is respected like that of a citizen or subject, no protection whatever is granted to the author, inventor, or artist for the rights which belong to him, and which, on account of their immaterial and intangible character, can be more easily violated. Henry Clay, speaking in the United States Senate in 1837 of literary property, said :

A British merchant brings or transmits to the United States a bale of merchandise, and the moment it comes within the jurisdiction of our laws they throw around it effectual security. But if the work of a British author is brought to the United States, it may be appropriated by any resident here and republished without any compensation whatever being made to the author. We should all be shocked if the law tolerated the least invasion of the rights of property in the case of the merchandise, while those which justly belong to the works of authors are exposed to daily violation without the possibility of their invoking the aid of the laws.

This protection—which may be termed international—of literary and artistic copyright outside of the country of its origin has been accorded by the nations of Europe and America only in reciprocity for equal protection given to their citizens or subjects simply as an act of international comity, or by virtue of compacts and conventions, but it has never been demanded as an invested right.

It was not until 1815, in the Congress of Vienna—and then only in a limited degree—that the principle of international protection of literary and artistic property was first recognized in Europe by the provision, which was there adopted, that the authors and artists of every State included in the Germanic Confederation should enjoy throughout said Confederation the same protection granted by law to authors and artists who were citizens. Afterwards Denmark, Great Britain, Switzerland, and Austria, each separately, agreed to recognize the intellectual property of those nations which should grant them reciprocal rights. To France belongs the honor of being the first to solemnly proclaim, as it did in 1852, the principle of unlimited and absolute international protection of intellectual property and of making the unauthorized reproduction of works published in foreign countries a punishable offense. This liberal principle was also adopted unanimously in 1858 by the Literary Congress of Brussels, which, with the object of generalizing it, made some very important declarations, which were adopted (although without immediate practical results) by the Literary Congress of Antwerp in 1861, of Vienna in 1873, of the Hague in 1875, and of Bremen in 1876. It was not, however, until 1886, in the Literary and Artistic Conference of Berne, in which Germany, Belgium, France, Spain, Great Britain, Hayti, Italy, Liberia, and the Regency of Tunis took part, that a positive and official result could be reached. In fact, the nations represented constituted themselves an *International Union for the Protection of Literary and Artistic Works*. They signed a convention, in which “literary and artistic works” were defined and enumerated, the rights of authors clearly specified, and means adopted for rendering them effective; and the *Union* established an international office, under the supervision and supreme authority of the Swiss Con-

ederation, the functions of which were fixed with the common consent of the contracting parties.

As a general rule, the nations of Europe have not granted the protection of their laws to the industrial property of foreigners, except as acts of reciprocal courtesy or in virtue of express stipulations contained in international compacts. Just as in the case of literary and artistic copyright, to France belongs the honor of first proclaiming the ample and absolute principle of international protection to industrial property. The "International Congress of Industrial Property," held in Paris in 1878 under the auspices of the French Government, included in its labors every subject relative to "industrial property;" but, confining itself within the limits of its mission, it merely recommended the Governments to open negotiations with a view to equalizing the legislation of the several nations on so important a subject. The Conference of 1880, which also assembled in Paris, endeavored to give a practical and definite form to the declarations made in 1878; and, with this intent, prepared a draught of an international convention, in which it was provided that all the nations adopting it should constitute a union, within which industrial property should enjoy uniform protection before all the courts of justice.

Nevertheless, this convention did not obtain the ratification of the Governments, and it was not until 1883 that the establishment of a Union for the International Protection of Industrial Property was definitely realized. According to the terms of the convention, signed in Paris on the 20th of March of that year by the representatives of France, Belgium, Brazil, Spain, Guatemala, Italy, Holland, Portugal, Salvador, Servia, and Switzerland, these nations constituted themselves a Union for the Protection of Industrial Property. It was, moreover, provided that this property, in the broadest acceptation of the term, should enjoy in each of the countries composing the Union all the advantages granted by their respective laws to citizens or subjects. Special provisions were formulated with the object of protecting the names of business firms and facilitating the punishment of counterfeiters of trade-marks. And, finally, it was agreed to organize an "International Office of Industrial Property," to be maintained by funds appropriated by the contracting States, and placed under the high authority and supervision of the superior administration of the Swiss Confederation. The ratifications of the Governments were quickly exchanged, and, in conformity with the provision, the International Office was organized in Berne under the authority of the Swiss Government.

To the recent Congress of Private International Law, of Montevideo, assembled in response to an invitation issued by the Governments of the Argentine Republic and the Republic of Uruguay to the other nations of South America, is due the high honor of having been the first to acknowledge on this continent and solemnly establish the most wholesome principles of law for the solution of disputes arising from the differences of the legislation of one country from that of another, and of establishing among these principles that of international protection of literary, artistic, and industrial property. In the three treaties on literary and artistic copyright, on trade-marks, and on patents, subscribed to by the representatives of the Argentine Republic, Bolivia, Brazil, Chili, Paraguay, Peru, and the Republic of Uruguay, who attended said Congress, your Committee on Patents and Trade-marks finds the principles set forth which, in its opinion, should be adopted throughout this continent, in order to assure and give effective

protection to the rights of literary, artistic, and industrial property acquired in any of the nations represented in this Conference.

In the treaties referred to literary and artistic works, trade-marks, and patents of invention are clearly and precisely defined; in the same manner are prescribed the rights of authors and artists, proprietors of trade-marks, and inventors, which the contracting powers guaranty and protect; the formalities to be observed in obtaining this protection and guaranty; the limits of said rights, and the manner in which they may be exercised. All the conflicts on those subjects which may arise from diversity of legislation between the contracting States are settled by clear and precise provisions, which are formulated with all due respect to the sovereignty and laws of each State. Thus, for instance, in respect to literary and artistic copyrights it is provided that authors and artists shall enjoy the rights accorded them by the laws of the State in which the original publication or production of their works took place, but that no State is obliged to recognize such rights for a longer time than that allowed to authors who obtain the same right in that State.

Rights to trade-marks granted in one country are recognized in the others, but with due regard to the laws of the latter; and to enjoy the right to an invention for which a patent has been obtained in any one of them it is necessary to have the patent registered in any other in which its recognition is asked for in the form prescribed by its laws. With regard to the duration of patents, the same principle is established which was previously mentioned in relation to literary and artistic copyrights, and it is moreover provided that the duration of the patent may be limited in each State to the period prescribed by the laws of the State in which the patent was first granted, if such period be the shorter. It is also provided that questions arising on the priority of invention shall be settled according to the date of the application for the respective patents in the countries where they were granted. Finally, in all these treaties the principle is established that those who violate the rights of property therein recognized and guarantied can be legally arraigned only before the courts of the country in which the offense may have been committed.

The Committee on Patents and Trade-marks begs leave to append to this report copies of the treaties of the Congress of Montevideo, above referred to. Being persuaded that by the formal adoption on the part of the nations here represented of the just principles embodied in those treaties, and by their enactment into positive law, the necessary protection of the rights of literary, artistic, and industrial property will be secured, your committee respectfully submits the appended resolution to the consideration of the Conference. If the above-mentioned treaties are ratified by the subscribing nations, and are furthermore adopted by the Republics of Colombia, Ecuador, and Venezuela, which, although they approved the proposition to assemble said Congress, could not take part therein owing to the pressure of time, then those principles shall be the law in force on the subject in the whole of South America. In Central and North America they may likewise have equal authority if, in accordance with the stipulations of Article 6 of the additional protocol of the South American Congress, the subscribing nations consent, as is to be expected, to the adoption of the treaties by those nations who were not invited to it, in the same form as those which, while approving the proposal that it should assemble, took no part in its deliberations.

RECOMMENDATIONS AS ADOPTED BY THE CONFERENCE.

Whereas the International American Conference is of the opinion that the treaties on literary and artistic property, on patents, and on trade-marks, celebrated by the South American Congress of Montevideo, fully guaranty and protect the rights of property which are the subject of the provisions therein contained ;

Resolved, That the Conference recommend, both to those Governments of America which accepted the proposition of holding the Congress, but could not participate in its deliberations, and to those not invited thereto, but who are represented in this Conference, that they adopt the said treaties.

APPENDIX.

TREATY ON LITERARY AND ARTISTIC COPYRIGHT.

His Excellency, the President of the Republic of ———, etc., etc., having agreed to enter into a treaty on literary and artistic copyright through their plenipotentiaries in congress assembled, in the city of Montevideo, by invitation of the Governments of the Argentine Republic and of the Eastern Republic of Uruguay ;

His Excellency, the President of the Republic of ———, being represented by Mr. ———, etc.;

Who, after exhibiting their full powers, which were found in due form, and after the conferences and discussions necessary to the case, have agreed upon the following stipulations :

ARTICLE I.

The contracting States promise to recognize and protect the rights of literary and artistic property, according to the provisions of the present treaty.

ARTICLE II.

The author of any literary or artistic work, and his successors, shall enjoy in the contracting States the rights accorded him by the law of the State in which its original publication or production took place.

ARTICLE III.

The author's right of ownership in a literary or artistic work shall comprise the right to dispose of it, to publish it, to convey it to another, to translate it, or to authorize its translation, and to reproduce it in any form whatsoever.

ARTICLE IV.

No State shall be obliged to recognize the right to literary or artistic property for a longer period than that allowed to authors who obtain the same right in that State. This period may be limited to that prescribed in the country where it originates, if such period be the shorter.

ARTICLE V.

By the expression literary or artistic works is understood all books, pamphlets, or other writings, dramatical or dramatico-musical works, chorographies, musical compositions with or without words, drawings, paintings, sculptures, engravings, photographs, lithographs, geographical maps, plans, sketches, and plastic works relating to geography, topography, architecture, or to sciences in general; and finally every production the field of literature or art which may be published in any way by printing or reproduction.

ARTICLE VI.

The translators of works of which a copyright either does not exist or has expired shall enjoy with respect to their translations the rights declared in Article III, but they shall not prevent the publication of other translations of the same work.

ARTICLE VII.

Newspaper articles may be reproduced upon quoting the publication from which they are taken. From this provision articles relating to sciences or arts, and the reproduction of which shall have been prohibited by the authors, are excepted.

ARTICLE VIII.

Speeches pronounced or read in deliberative assemblies, before tribunals of justice, or in public meetings, may be published in the public press without any authorization whatsoever.

ARTICLE IX.

Under the head of illicit reproductions shall be classed all indirect, unauthorized appropriations of a literary or artistic work, which may be designated by different names as adaptations, arrangements, etc., etc., and which are no more than a reproduction without presenting the character of an original work.

ARTICLE X.

The rights of authorship shall be allowed, in the absence of proof to the contrary, in favor of the person whose names or pseudonyms shall be borne upon the literary or artistic works in question.

If the authors wish to withhold their names, they should inform the editors that the rights of authorship belong to them.

ARTICLE XI.

Those who usurp the right of literary or artistic property shall be brought before the courts and tried according to the laws of the country in which the fraud may have been committed.

ARTICLE XII.

The recognition of the right of ownership of literary and artistic works shall not prevent the contracting States from preventing by suitable legislation the reproduction, publication, circulation, representation, or exhibition of all works which may be considered contrary to good morals.

ARTICLE XIII.

The simultaneous ratification of all the contracting nations shall not be necessary to the effectiveness of this treaty. Those who adopt it will communicate the fact to the Governments of the Argentine Republic and the Eastern Republic of Uruguay, who will inform the other contracting nations. This formality will take the place of an exchange.

ARTICLE XIV.

The exchange having been made in the manner prescribed in the foregoing article, this treaty shall remain in force for an indefinite period after that act.

ARTICLE XV.

If any of the contracting nations should deem it advisable to be released from this treaty, or to introduce modifications in it, said nation shall so inform the rest; but it shall not be released until two years after the date of notification, during which time measures will be taken to effect a new arrangement.

ARTICLE XVI.

The provisions of Article XIII are extended to all nations who, although not represented in this Congress, may desire to adopt the present treaty.

Wherefore, the plenipotentiaries of the nations enumerated sign and affix their seals to the foregoing, to the number of ——— exemplars, in the city of Montevideo, on the ——— day of the month of January, in the year 1889.

[L. S.]

(Signatures.)

TREATY ON TRADE-MARKS.

His Excellency, the President of the Republic of ———, etc., etc., having agreed to enter into a treaty on trade-marks, through their plenipotentiaries in congress assembled in the city of Montevideo, by invitation of the Governments of the Argentine Republic and of the Eastern Republic of Uruguay ;

His excellency, the President of the Republic of ———, being represented by Mr. ———, etc.;

Who, after exhibiting their full powers, which were found in due form, and after the conferences and discussions necessary to the case, have agreed upon the following stipulations :

ARTICLE I.

Any person to whom shall be granted in one of the contracting States the exclusive right to a trade-mark shall enjoy the same privilege in the other States, but with due respect to the formalities and conditions established by their laws.

ARTICLE II.

The ownership of a trade-mark shall include the right to use or to sell or otherwise convey it.

ARTICLE III.

By trade-mark shall be understood the sign, emblem, or exterior motto which the merchant or manufacturer adopts and applies to his wares and products in order to distinguish them from those of other dealers or manufacturers trading in articles of the same character.

To this class of marks shall belong those called trade devises, or designs, which by means of weaving or stamping are affixed to the product exposed for sale.

ARTICLE IV.

Counterfeits or alterations of trade-marks shall be prosecuted before the courts, according to the laws of the State in whose territory the fraud was committed.

ARTICLE V.

The simultaneous ratification of all the contracting nations shall not be necessary to the effectiveness of this treaty. Those who adopt it will communicate the fact to the Governments of the Argentine Republic and the Eastern Republic of Uruguay, who will inform the other contracting nations. This formality will take the place of an exchange.

ARTICLE VI.

The exchange having been made in the manner prescribed in the foregoing article, this treaty shall remain in force for an indefinite period after that act.

ARTICLE VII.

If any of the contracting nations should deem it advisable to be released from this treaty, or to introduce modifications into it, said nation shall inform the rest ; but it shall not be released until two years after the date of notification, during which time measures will be taken to effect a new arrangement.

ARTICLE VIII.

The provisions of Article V are extended to all the nations who, although not represented in this Congress, may desire to adopt the present treaty.

Wherefore the Plenipotentiaries of the nations enumerated sign and affix their seals to the foregoing to the number of ——— exemplars, in the city of Montevideo, on the ——— day of the month of January, in the year 1889.

[L. S.]

(Signatures.)

TREATY ON PATENTS OF INVENTION.

His Excellency, the President of the Republic of ———, etc., etc., having agreed to enter into a treaty on patents of invention through their plenipotentiaries in congress assembled, in the city of Montevideo, by invitation of the Governments of the Argentine Republic and of the Eastern Republic of Uruguay;

His Excellency, the President of the Republic of ———, being represented by Mr. ———, etc.;

Who, after exhibiting their full powers, which were found in due form, and after the conferences and discussions necessary to the case, have agreed upon the following stipulations:

ARTICLE I.

Any person who shall obtain a patent or privilege of invention in any of the contracting States shall enjoy in all the others the rights of inventor, if within a year at the utmost he shall cause his patent to be registered in the form prescribed by the laws of the country in which he shall ask for its recognition.

ARTICLE II.

The duration of the privilege shall be that fixed by the laws of the country in which it is to take effect. This period may be limited to that prescribed by the laws of the State in which the patent was first granted, if such period be the shorter.

ARTICLE III.

Questions arising as to the priority of invention shall be settled according to the date of the request for the respective patents in the country where they were granted.

ARTICLE IV.

By invention or discovery shall be understood any new method, mechanical or manual apparatus, for the manufacture of industrial products; the discovery of any new industrial product, and the application of perfected methods for obtaining results superior to any previously known.

No patents shall be granted—

(1) To inventions or discoveries already made public in any of the contracting States, or in others not bound by this treaty.

(2) To those contrary to good morals or to the laws of the country in which the patents are to be issued or recognized.

ARTICLE V.

The rights of the inventor shall include that of enjoying the use of his invention and of transferring it to others.

ARTICLE VI.

Those persons interfering in any way with the rights of the inventor shall be prosecuted and punished according to the laws of the country in which the offense may be committed.

ARTICLE VII.

The simultaneous ratification of all the contracting nations shall not be necessary to the effectiveness of this treaty. Those who adopt it will communicate the fact to the Governments of the Argentine Republic and the Eastern Republic of Uruguay, which will inform the other contracting nations. This formality will take the place of an exchange.

ARTICLE VIII.

The exchange having been made in the manner prescribed in the foregoing article, this treaty shall remain in force for an indefinite period after that act.

ARTICLE IX.

If any of the contracting nations should deem it advisable to be released from this treaty, or to introduce modifications in it, said nation shall so inform the rest; but it shall not be released until two years after the date of notification, during which time measures will be taken to effect a new arrangement.

ARTICLE X.

The provisions of Article VII are extended to all nations who, although not represented in this Congress, may desire to adopt the present treaty.

Wherefore the plenipotentiaries of the nations enumerated sign and affix their seals to the foregoing to the number of ——— exemplars, in the city of Montevideo, on the ——— day of the month of January in the year 1889.

[L. S.]

(Signatures.)

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING AN

UNIFORM SYSTEM OF WEIGHTS
AND MEASURES.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State, with a report of the International American Conference on the subject of weights and measures.

JULY 12, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

WEIGHTS AND MEASURES.

To the Senate and House of Representatives:

I transmit herewith a letter from the Secretary of State, inclosing a copy of the Report upon Weights and Measures adopted by the International American Conference, recently in session at this capital.

BENJ. HARRISON.

EXECUTIVE MANSION, July 12, 1890.

DEPARTMENT OF STATE,
Washington, July 12, 1890.

THE PRESIDENT:

I have the honor to transmit herewith a copy of the Report on Weights and Measures as unanimously adopted by the International American Conference. This report, as will be seen, recommends the adoption by the United States of the metrical decimal system of weights and measures, which is now in use by the Governments and people of all the other American Republics and most of the nations of Europe, and which is already authorized by the laws of the United States. The adoption of this system in the customs service would, it is believed, greatly promote the public convenience, and I beg leave to submit, for the consideration of Congress, the draught of a bill for that purpose.

Respectfully submitted.

JAMES G. BLAINE.

A BILL to authorize the use of the metric system of weights and measures in the customs service of the United States.

Be it enacted by the Senate and House of Representatives in Congress assembled, That from and after the first of July, 1891, the metric system of weights and measures, authorized by the act of Congress approved July 28, 1866, shall be used exclusively in the customs service of the United States.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT ON WEIGHTS AND MEASURES.

To the Honorable the International Conference :

The committee appointed by the honorable president to inquire into the advisability of the adoption, by all the nations here represented, of a uniform system of weights and measures, have the honor to submit the following report :

The need of establishing a unit of comparison for everything susceptible of being weighed or measured was doubtless recognized from the remotest antiquity ; or rather from the time when, the right of ownership being acknowledged, the bartering or exchange of commodities became a definitely established practice.

History shows that this unit of comparison was generally some portion of the human body.

The Hebrews, as well as the Carthaginians, Phœnicians, and Egyptians, had, as their principal measure of length, the foot.

Later, the Greeks and Romans added to the number of their measures the finger, the thumb or inch, the palm, the fathom, the pace, the double-pace, etc., the names of which indicate the source whence they are derived.

These are the measures which even after the lapse of centuries have been in use in the greater number of civilized nations.

But as the human body varies so much in size the measures adopted from it are necessarily arbitrary. At the present day even the learned are not agreed about the exact length of the Greek and Roman foot, being divided in their opinions among various estimates.

It is evident, then, that such a standard of measurement has not and can not have a constant and uniform basis even at a given period, and still less at different times, or with reference to different races at the same time.

Such considerations induced the Constituent Assembly of France, in the last decade of the eighteenth century, to adopt as the basis of a system a simple and invariable dimension susceptible of ascertainment at all times.

So, by decree of May 8, 1790, upon the motion of Mr. Talleyrand, it was ordered that a commission composed of French savants, to be appointed by the Academy, should be charged with ascertaining the length of a simple pendulum which would mark a second at the level of the sea in latitude 45°. The same decree provided that the Government should request the King of England to appoint a committee from the Royal Society of London to co-operate with the French commission with a view to establishing a common system of weights and measures, and recommending its use to the other nations.

The French delegates, nominated by the Academy, were Lagrange, Laplace, Monge, and Condorcet. The English Government declined to co-operate, assigning as a reason the political contentions then agitating France.

The French commission, departing from the original programme, which contemplated chiefly the determination of a pendulum vibrating seconds, considered the question whether it would not be better to take as a unit of length a fraction of the earth's meridian. This idea having been adopted, for fear that there would else be difficulty in securing

for the new system the approval of those nations whose territory was not intersected by the 45th degree, the commission on the 17th of March, 1791, presented to the National Assembly a report in which it proposed to adopt as a fundamental unit the $\frac{1}{10000000}$ of a quarter of the earth's meridian, and to give to this unit the name of meter. In accordance with these recommendations, Mechain and Delambre were charged with the delicate problem of measuring the arc of the meridian included between Dunkirk and Barcelona. Mechain and Delambre found the quarter of the meridian equal to 5,130,740 toises, which result was adopted by the legislative body on the fourth Messidor of the year VII (June 22, 1799).

The same measure of length served also as a basis for establishing the unit of weight called a gram, adopted by the law of the eighteenth Germinal, year III. This is the weight, in a vacuum, of a cubic centimeter, of distilled water, taken at its maximum density, which corresponds to the temperature of 4° centigrade above zero.

The expressive nomenclature with its concise prefixes, the ascending and descending series of multiples and submultiples, and the facility with which it lends itself to decimal calculation, make this simple and admirable system the only one worthy of universal adoption by civilized nations.

In fact, in 1873 an international commission, known as "The [International] Metric Commission," met in Paris, with a view to agreeing upon the adoption of a universal system of measures. England, Russia, Austria, Germany, Bavaria, Würtemberg, Switzerland, Italy, Spain, Portugal, Belgium, Holland, Sweden, Denmark, Turkey, the United States, and several of the Spanish American Republics were represented by distinguished scientific men. After careful deliberation they abandoned the idea which had been entertained, of a new measurement of the earth's meridian, recognizing the fact that such an undertaking would be attended with great difficulties, and could yield only uncertain results, and they agreed to adopt the French meter, the standard of which is preserved in the French archives.*

The same decision was taken with regard to the kilogram as the unit of weights.

The commission also recommended certain necessary precautions for securing the accuracy of the standard meter according to the dimensions fixed upon.

Finally, a convention for securing the international unification and perfection of the metric system was signed in Paris on the 20th of May, 1875, which convention was ratified by the Governments of the following nations: Switzerland, Germany, Austria-Hungary, Argentine Republic, Denmark, Spain, Italy, Peru, Portugal, Belgium, Brazil, United States, France, Russia, Sweden and Norway, Turkey, and Venezuela.

The following gave their adhesion afterwards: Servia, in 1879; Roumania, in 1882; Great Britain, in 1884; and Japan in 1885. The Republics of Chili, Colombia, Equador, Bolivia, Costa Rica, Mexico, Salvador, and Uruguay have also adopted that system.

In a recent lecture delivered before the Academy of Sciences at Paris, M. de Malarce said:

That in 1877 the use of the metric system was obligatory in various parts of the globe, that system being the one employed by 302,000,000 persons; that in the course of ten years it had been adopted by 53,000,000 more; that in the same year, 1877, various countries containing a population of 97,000,000 voluntarily adopted the use

* In the International Metric Bureau, which seventeen nations contribute to support and direct.

of this system; that it was also legally admitted in Russia, Turkey, and British India, which had, the same year, 1877, a population of 395,000,000, thus receiving in ten years an addition of 545,000,000. In China, Japan, and Mexico the decimal system prevails, but not the metric. This last has been adopted and legally recognized by 794,000,000 souls, and the decimal system is in use among 470,000,000 of inhabitants in the three countries last named. So that only 42,000,000 persons exist who reckon according to the ancient systems of weights and measures, and who do not recognize the metrico-decimal.

Recently the United States Government received official fac-similes of the meter and kilogram agreed upon in the International Metrical Conference, held in Paris in September of last year, and the boxes containing them were officially opened on the 2d instant at the Executive Mansion in the presence of the President of the Republic and other functionaries, and certain distinguished personages specially invited for the ceremony.

RECOMMENDATION AS ADOPTED BY THE CONFERENCE.

The advantages which the metrico-decimal system offers being so evident, and that system having been already adopted by so considerable a number of nations, your committee recommend the adoption of the following :

Resolved, That the International American Conference recommends the adoption of the metrical decimal system to the nations here represented which have not already adopted it.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

•
CONCERNING A

UNIFORM SYSTEM OF PORT DUES.



MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A report of the International American Conference relative to a proposed uniform system of port dues and consular fees.

JULY 14, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith a letter from the Secretary of State, inclosing the recommendations of the International American Conference, recently in session at this capital, concerning a uniform system of port dues and consular fees to be adopted by the several American Republics, to which I invite your attention.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 14, 1890.

DEPARTMENT OF STATE,
Washington, July 14, 1890.

THE PRESIDENT :

The International American Conference, recently in session at this capital, made some important suggestions for the consideration of the several Governments represented, looking to the reduction and simplification of port charges and consular fees. Copies of the reports are herewith submitted, with the hope that you will deem them worthy to be transmitted to Congress, for such action as may be thought advisable.

Respectfully submitted,

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONFERENCE.

REPORTS ON PORT DUES.

I.

The committee, after duly considering the various suggestions which have been offered, and also the difficulties raised by certain of the delegations to fixing at present any one common and uniform rate of port dues in all the nations represented in the Conference (on account of the special conditions at present prevailing in the ports of several of said nations in respect to the services for which the charges are made); and desiring to approach as closely as possible to uniformity, while it is impracticable completely to abolish the charges now imposed upon vessels in the shape of such dues, has the honor to submit the following report:

RECOMMENDATIONS AS ADOPTED BY THE CONFERENCE.

The International American Conference hereby resolves to recommend to the Governments therein represented:

First. That all port dues be merged in a single one, to be known as tonnage dues.

Second. That this one charge shall be assessed upon the gross tonnage, or, in other words, upon the total carrying capacity of the vessel.

Third. That each Government fix for itself the amount to be charged as tonnage dues, but with due regard to the general policy of the Conference upon the subject, which is to facilitate and favor navigation.

Fourth. That there be excepted from the provisions of Article I the dues charged or to be charged under unexpired contracts with private companies.

Fifth. That the following shall be exempt from tonnage dues:

1. Transports and vessels of war.
2. Vessels of less than 25 tons.
3. Vessels which by any unforeseen and irresistible cause shall be compelled to put into port, deviating from their course.
4. Yachts and other pleasure boats.

 II.

ON CONSULAR FEES.

The honorable Conference has instructed this committee to consider and propose the most adequate manner of establishing a uniform system of consular fees.

The comparative study of the regulations which the committee has been able to examine, has led it to the conclusion that within the limits assigned to it, the desired result could only be secured in a partial and incomplete manner.

Inasmuch as the fees or compensation allowed to consuls depends upon the nature of the services they render, it is necessary that the acts of the consular agents of the different nations represented in the Con-

ference be of the same nature in order that the fees charged by them may be equal and uniform.

It is this prerequisite which is lacking in the present consular regulations.

With the exception of acts specially referring to navigation and commerce, respecting which it would be very easy to establish a uniformity of fees, there are many acts which either only exist in the rules of one of the nations here represented, or else differ in detail or manner of classification so as to prevent the fixing of the amount of the fee.

Your committee does not consider it impossible to establish identical regulations for the consular agents of American nations; but since on the one hand we have not believed ourselves authorized to undertake it, in view of the scope of our instructions, and on the other, it is probable that the time remaining which the honorable delegates can devote to the various subjects submitted to their consideration would not suffice for the careful study required by a matter of that nature, we have thought it preferable, with a view to obtaining a precise result, to offer the following resolution :

RECOMMENDATION AS ADOPTED BY THE CONFERENCE.

Resolved, That the Governments represented in the Conference be recommended to prepare a uniform classification of the acts requiring the intervention of consular agents, fixing the maximum fees which should properly attach to each one of such acts, especially those relating to commerce and navigation.



INTERNATIONAL AMERICAN CONFERENCE.

REPORTS AND RECOMMENDATIONS

CONCERNING A

UNIFORM CODE OF INTERNATIONAL LAW.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A report of the International American Conference touching a uniform code of International Law.

JULY 14, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives:

I transmit herewith a letter from the Secretary of State, inclosing the recommendation of the International American Conference with reference to the adoption by the American Republics of a uniform code of international law, to which your attention is respectfully directed.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 14, 1890.

DEPARTMENT OF STATE,
Washington, July 14, 1890.

The PRESIDENT:

I have the honor to hand you a copy of a report on international law adopted by the International American Conference recently in session at this capital. The diversity of legislation by these several nations respecting property rights, contracts, partnerships, debt, marriage, dowry, inheritance, wills and bequests, the age of majority, the conveyance of property, the legalization of documents, and other civil and commercial transactions has been the source of great annoyance and expense to citizens of one nation who happen to be residing in another.

At the conference of the South American nations, in session at Montevideo from August, 1888, to February, 1889, careful study was bestowed upon this subject, resulting in the formation of a code of civil and commercial law, which has already been ratified by several of the Republics of the southern continent, namely, Bolivia, Brazil, Chili, Paraguay, Peru, Uruguay, and the Argentine Republic.

The recent Conference commends this code to the consideration of the Governments which have not given it their sanction, and the same is forwarded for the information of Congress

I also forward herewith, for the information of Congress, supplementary reports from the Committee on International Law—

(A) On the subject of claims and diplomatic intervention,

(B) On the navigation of rivers,
with recommendations in which the delegates on the part of the United States could not concur, and a majority report setting forth the grounds of their objection; also a rejoinder by the delegate from Ecuador to such minority report.

Respectfully submitted.

JAMES G. BLAINE.

INTERNATIONAL AMERICAN CONGRESS.

REPORTS ON INTERNATIONAL LAW.

I.

ON CIVIL AND COMMERCIAL LAW.

The Committee on International Law, whose duty it is to propose uniform rules of private international law concerning civil and commercial matters and the legalization of documents, has now the honor to submit for the consideration of the honorable delegates the result of its studies and deliberations.

Though uniformity of rules in matters of private international law was not specifically and expressly named in the act of Congress convoking this Conference as one of the subjects to be treated in the latter, there is no doubt that it falls legitimately within the scope and nature of those subjects, since such uniformity would most directly tend to promote prosperity and stability in the mutual relations of the various States of America. If the difficulties of communication, the differences to be found in the organization and the rules of the respective custom-houses, and even the diversity of weights and measures, are obstacles to the attainment of the desired end—that is, the greatest practicable unification and harmonization of the people of these States—a no less important obstacle is that which arises out of conflicts of law upon matters of daily occurrence and constant application. To facilitate the movement among these communities it is not only expedient but indispensable to endeavor to remove such obstacles.

Private international law is that branch of law which has the most direct, immediate, and intimate bearing upon the person, the family, and property; or, in other words, upon the three precious elements characterizing man in his social aspect. Vainly would we offer to any individual all the inducements of rapid, convenient, and cheap communication, or of similarly favorable conditions in matters of port dues, custom-houses, and money, if other subjects which are to him of the greatest moment, concerning either his personal rights, his authority and position in his family, or his powers and privileges in regard to his property, remain in doubt. Uniformity of rules in private international law would tend to remove this uncertainty, the consequences of which are the more to be feared as the union brought about by a more active and fruitful commercial intercourse grows closer and more intimate between the nations.

The ideal, no doubt, is an absolute and complete uniformity of legis-

lation, at least upon those points on which conflicts may arise. But as this can not at present be hoped for, we must at least provide a definite and safer rule by which such conflicts may be settled as they arise. Inasmuch as every nation, whether great or small, is entirely free to adopt for itself such institutions and laws as it may deem best calculated to supply its needs or to meet the circumstances which surround it, it of course happens that the differences of legislation exhibited by them are sometimes striking.

By virtue of the sovereignty of those States each of them has the indisputable right to enforce its laws within the limits of its territory and with respect to its own citizens. But when the case is that of foreigners within its territory, or of the citizens of the State in foreign territory, then there has to be considered, besides the law of the State itself, the law of the foreigner's nation, or the law of the place in which the citizen finds himself. Supposing that these laws differ, as they may, in view of the diversity of conditions and circumstances of each sovereign State, the necessity will be felt, urgently and imperatively, of some established principle by which the matter should be set at rest. If the nations were to live in entire isolation, if they were neither to admit foreigners into their territory nor to allow their citizens to enter foreign territory, if there were to be no commerce, navigation, or communication, or if the laws relating to civil and commercial life were everywhere the same, no difficulty whatever would be encountered. But, as already stated, the facts are that the laws are, and for a long time will continue to be, diverse; and furthermore, that nations do not live, nor ought nor wish to live, in isolation, and that, quite to the contrary, the independent States of America have gathered together here to discuss, through their lawful representatives, those measures which, in their opinion, may be the safest and most efficacious for promoting the closest and most intimate union which their independence and their true interests may possibly allow.

If, for instance, the law of North America fixes the age of twenty-one years as the full legal age, and in any of the Spanish-American republics it is the rule that full legal age is not reached until the age of twenty-five, it is necessary to have some standard for deciding whether a Spanish-American citizen is of full age here at twenty-one, or if a North American there must wait to be twenty-five in order to be considered as of full age. If marriage is entered into here with certain solemnities, and there the form and the solemnities are different, it is necessary to decide whether parties entering into the contract of marriage in their territory according to the laws of their own nationality are or are not entitled to have such marriage treated as valid everywhere; and it is necessary also to decide whether a foreigner here, or a North-American out of the United States, must in his marriage observe the formalities of the law of his own country or the formalities of the place in which it is celebrated. If a marriage entered into in one republic may by the laws of the latter be dissolved and the parties to such marriage go to live in another republic whose laws declare the contract indissoluble, or *vice versa*, it is necessary to know how to decide whether the marriage in question may or may not be dissolved. If, according to the law of the place in which the marriage is celebrated, the wife has power to manage her property and freely administer it, and according to the law of the place to which the parties move and in which they live, the wife has not this power, but the husband is the legal administrator, it is urgent to determine what rule shall govern in case of controversy. If the order of succession is different; if in one

place inheritance is a matter of right and in another the property may be freely disposed of by will; if the effects of contracts are different; if the methods of entering into partnerships or other commercial relations are not the same, or if the consequences thereof are different; if the form and effects of a bill of exchange or any other commercial paper are different, it is imperative that some rule should exist for settling such questions as may arise.

These ordinary instances, which might be indefinitely multiplied in every branch of civil and commercial law, and further complicated by questions as to what law applies to property found in one territory, when the owner is a foreigner, plainly demonstrate the necessity of certain rules for the determination of such controversies. These differences are due, as before said, to the sovereignty of the different States manifesting itself in diversities of legislation; but they ought, nevertheless, to be made to disappear by the harmonious action of the sovereignties themselves, in pursuance of their laudable desire to avoid all occasion of troubles or disputes among them.

Down to the present time all these conflicts have been decided according to doctrines held by writers on private international law, based on a philosophic study of the nature and bearing of the laws affecting the mutual relations of nations. But, although the progress already achieved in this branch is unquestionably great, and although the writings of Foelix, Fiore, Calvo, Riquelms, Wheaton, Story, Wharton in his work on the *Conflict of Laws*, Dudley Field in the draft of a *Code of International Law*, and very many others, whose mention would involve too great prolixity, have thrown considerable light upon all these subjects, their opinions, however, do not always agree upon important points, nor possess the binding force or the solemn authority which only can be imparted by the voluntary, express, and concerted recognition which a treaty gives. To secure this recognition would certainly be a very great step towards obtaining union, and the committee feels that it is its duty to set forth what are the reasons why, in spite of these considerations, it has been restrained from attempting, definitively and at once, anything in that direction, as it would very strongly have desired to do.

As all matters of private international law are intimately and necessarily connected with points of municipal law and technical jurisprudence and as the present Conference was not intended to be a congress of jurists, the committee has feared that some of the honorable members of the Conference would not feel authorized or disposed to enter upon discussions of law and undertake the study of the numerous provisions which would necessarily form part of any complete code of private international law on civil and commercial matters. Nor could the committee content itself, especially since elsewhere, as in Lima and Montevideo, such elaborate and accurate conclusions have been reached, with submitting for the approval of the Conference some five or six general and more or less indefinite principles, such as ordinarily form the basis and foundation of the doctrines and conclusions of the writers of treatises, because this would have had no practical effect or consequence, and would have left the subject in the same condition of vagueness and uncertainty that it was before. For these reasons the committee has had recourse to a plan which, in its judgment, not only avoids difficulties, but affords the best guaranties of certainty and the greatest probability of our securing safe and useful practical results.

The formulation of a code of private international law on civil and commercial matters would certainly require more time and attention

than can now be given to it, inasmuch as this is not the only subject with which the Conference has to deal, there being, in addition, many others of importance. Its discussion, furthermore, would be the work of many months, and this too, without there being any certainty that the end aimed at would be reached, because owing to the complexity of the subject and to the number and closeness of its relations to the internal legislation of each country, it would not be easy to form off-hand an accurate conception of what the common interests demand. Fortunately, the committee has found ready to its hand as distinguished and complete a presentation of the subject as could be desired. That presentation is embodied in the Treatise of Civil and Commercial Law sanctioned by the South American Congress of Private International Law of Montevideo, which opened on the 25th of August, 1888, and closed on the 18th of February, 1889. The amplitude of the discussions in that Congress, the minute and careful study of every point and detail involved, the intelligent consultation and laborious study which the reports and discussions show to have been bestowed upon the works of the most distinguished European and American writers, the just appreciation with which it has met, and, above all, the circumstance—so clearly entitled to great weight—that it has already secured the adhesion of seven of the American nations, have powerfully influenced the judgment of the committee in favor of embodying the work in question as the substance of what is to be recommended.

Had it not been for the reasons above indicated, in view of the wide scope of the said treaties, which the honorable members of the Conference already know—comprising, as they do, all matters of civil and commercial law—and had it not been, furthermore, for certain special obstacles which would prevent the delegation of the United States of America from adopting the suggestion, the committee would have simply suggested a recommendation to be made to the Governments represented in this Conference to adopt the treaties in question. But (the committee repeats) in view of them, and in view especially of the probability that some of the honorable delegates might feel bound, before indorsing such a recommendation, to go through a detailed personal study of the said treaties, and, perhaps, an examination and discussion of every one of the articles thereof, which would occupy the attention of the Conference for many months, it has decided not to go so far in the resolution to be submitted. That resolution accordingly embodies only the suggestion that the Conference recommend to the various Governments represented therein which have not already adopted the Treaties of Civil and Commercial Law formulated by the Congress of Private International Law at Montevideo that they examine the said treaties in such manner as they may deem most convenient, and, within one year from the closing of this Conference, announce whether they accept the same, and if they do, whether such acceptance is absolute or with restrictions or modifications.

The committee believe that by this plan undue haste is avoided in taking final action upon matters so delicate and important; and that, while in this way a sufficient time is afforded to each Government for making, in such manner as it shall deem best, an examination of the said treaties and for deciding as to the expediency of adopting them, or as to the necessity for modifications thereof, there is also presented a safe and definite foundation in a work already accomplished, and which, to the other sanctions which it presents, joins that of its being already the law of a considerable number of American nations.

It is possible—nay, probable and almost certain—that on a separate examination of some of the provisions of those treaties there may be found a formula which, in respect of expression or even of substance, would constitute an improvement upon those provisions; but the work ought to be considered as a whole, without losing sight of the fact that in these matters what is to be hoped for is not perfection in all the details, but the best result upon which the majority can unite without serious inconvenience to any. In this is found another reason for leaving to the Governments the examination of these treaties taken together, inasmuch as they would feel more at liberty to exercise their full authority in passing upon this or that point which here might give occasion now and then to the most serious scruples. They alone, furthermore, could, after thorough and adequate study, accurately estimate the importance, scope, and consequences of the changes which would have to be made in internal legislation and the greater or less practicability of those changes.

The committee believes thus that the resolution which it submits, while it may prove productive of very beneficial results, can not be said unduly to compromise the responsibility of the honorable delegates. It has this, furthermore, in its favor, that even in the improbable contingency that one or more of the Governments represented shall fail to adopt the treaties in question, this would not prevent their adoption by the others; so that though it would not then constitute the private international law of all America, it might at least constitute that of a great many of the American nations. And it has this further advantage, beside, that it does not leave the subject to await the assembling of another conference, but leaves it to each Government to announce, in the way specified and independently of the others, its own adoption of the said treaties. The committee thinks, too, that it does not transcend its proper functions in suggesting that the recommendation be made to embrace the treaty concerning judicial procedure, it being a necessary complement of the others and the solemn expression of the form in which are to be made available those lawful actions open to each individual in civil and commercial matters.

With respect to the legalization of documents, the committee believes that the simplest and most philosophical principle is that adopted by the same Congress—to leave the formalities to the law of the country in which the document originates, and require only authentication by the diplomatic or consular agent accredited to the country or place of execution by the Government within whose territory the paper is to have effect.

In view of all of which the committee submits to the Conference the following resolutions:

THE RECOMMENDATIONS AS ADOPTED.

Resolved, That the Governments represented in this Conference, which as yet have not acceded to the treaties of private international law, civil law, commercial law, and law of proceedings adopted at the Congress which met at Montevideo on the 25th of August, 1888, be, and they are hereby, recommended to cause said treaties to be studied, so as to render themselves able, within the year, to be counted from the date of the termination of the labors of this Conference, to declare whether they do or do not accept the said treaties, and whether their acceptance of the same is absolute or qualified by some amendments or restrictions.

Resolved further, That the Governments represented in this Conference be, as they are, recommended to adopt in the matter of legalization of documents the principle that a document is to be considered duly legalized when legalized in accordance with the laws of the country wherein it was made or executed; and authenticated by the diplomatic or consular agent, accredited in the nation or locality where the document is executed, by the Government of the nation in which the document is to be used.

APPENDIX No. 1.

TREATY ON INTERNATIONAL CIVIL LAW.

[As approved by the South American Congress at Montevideo on February 1, 1889.]

TITLE I.—*Of persons.*

ARTICLE 1.

The legal capacity of persons shall be governed by the laws of their domicile.

ARTICLE 2.

Change of domicile shall not disturb the legal capacity acquired by emancipation, majority, or judicial authorization.

ARTICLE 3.

The State as a corporate body is competent to acquire rights and to contract obligations within the territory of another State, subject to the laws of the latter.

ARTICLE 4.

The existence and legal capacity of private corporations shall be governed by the laws of the country granting their charter.

The powers with which they are invested gives them full authority to exercise, out of their place of incorporation, all such acts and rights as are incidental to them.

In the exercise of acts included in the special purpose of their incorporation, however, they shall be subject to the provisions established by the State within whose territory they intend to exercise said acts.

TITLE II.—*Of the domicile.*

ARTICLE 5.

The law of the place of residence of a person shall determine the requirements necessary to constitute a domicile of said residence.

ARTICLE 6.

Parents, guardians, and curators shall be considered as domiciled in the State whose laws govern the discharge of their duties.

ARTICLE 7.

The domicile of persons who labor under legal disabilities shall be that of their legal representatives.

ARTICLE 8.

The domicile of husband and wife shall be that which the couple have adopted, and in default of such adoption, their domicile shall be that of the husband.

The domicile of the wife lawfully separated shall be that of the husband until she shall adopt another.

ARTICLE 9.

Persons without specified domicile shall have the same in their place of residence.

TITLE III.—*Of absence.*

ARTICLE 10.

The legal effects of a judgment of absence, as regards the property of the absentee shall be determined by the law of the place wherein the property is situated.

The other legal relations of the absentee shall continue to be subject to the law which previously governed them.

TITLE IV.—*Of marriage.*

ARTICLE 11.

The capacity of persons to contract marriage, the formalities, the continuance, and the validity thereof shall be governed by the law of place where the contract is entered into.

The contracting States, however, shall not be bound to recognize a marriage celebrated in one of them, should any of the following impediments exist:

(a) *Want of age* on the part of the contracting parties, it being required that the man be fully fourteen years and the woman twelve years of age.

(b) *Relationship* in direct line by consanguinity or by affinity, either legitimate or illegitimate.

(c) *Relationship* between legitimate or illegitimate brothers and sisters.

(d) Killing by any one, either as principal or accomplice, of one of the married parties for the purpose of marrying the survivor.

(e) Former marriage not lawfully dissolved.

ARTICLE 12.

The rights and duties of married parties in everything concerning their personal relations shall be governed by the laws of the matrimonial domicile.

Should the married parties change their domicile, the said rights and duties shall be governed by the law of their new domicile.

ARTICLE 13.

The law of the matrimonial domicile shall govern: (a) Legal separation of the parties. (b) Dissolution of the marriage tie; provided that the grounds alleged be sufficient under the law of the place where the marriage took place.

TITLE V.—*Of the paternal power.*

ARTICLE 14.

The paternal power in so far as it refers to personal rights and duties shall be governed by the law of the place where it is exercised.

ARTICLE 15.

Rights acquired by virtue of the paternal power by fathers over their children's property, as well as the alienation thereof and other acts affecting it, shall be governed by the law of the State wherein the said property is located.

TITLE VI.—*Of filiation.*

ARTICLE 16.

The law governing the marriage contract shall determine the legitimate filiation and the legitimation by subsequent marriage.

ARTICLE 17.

Questions concerning the legitimacy of the filiation which do not refer to the validity or nullity of the marriage shall be governed by the law of the conjugal domicile at the time of the child's birth.

ARTICLE 18.

The rights and duties incident to illegitimate filiation shall be governed by the law of the State wherein they must be exercised.

TITLE VII.—*Of guardianship and curatorship.*

ARTICLE 19.

The appointment to a guardianship and curatorship shall be governed by the law of the place of domicile of the persons who are legally incompetent.

ARTICLE 20.

A person appointed as guardian or curator in one of the contracting States shall be recognized as such in all the others.

ARTICLE 21.

Guardianship and curatorship shall be governed by the law of the place of appointment, as regards the rights and duties incident to the office.

ARTICLE 22.

The authority of guardians and curators over the property of persons legally incompetent, located elsewhere than their place of domicile, shall be exercised according to the law of the place where said property is located.

ARTICLE 23.

Legal hypothecation that may be allowed by law to persons legally incompetent shall have effect only when the law of the State where in the duties of guardian or curator are discharged is in accord with the law of that State wherein the property affected is located.

TITLE VIII.—*Provisions applicable to Titles IV, V, and VII.*

ARTICLE 24.

Pressing measures concerning the personal relations between husband and wife, the exercise of paternal powers, and guardianship and curatorship, shall be governed by the law of the place of residence of the married parties, parents, and guardians and curators.

ARTICLE 25.

The remuneration allowed by law to fathers, guardians, and curators, and the conditions thereof, shall be governed and determined by the law of the State of appointment.

TITLE IX.—*Of property.*

ARTICLE 26.

Property of whatever nature shall be exclusively governed by the law of the place of location in so far as regards its nature, possession, absolute or relative alienability, and generally in respect of all the legal incidents of its character as a thing (as distinguished from a person).

ARTICLE 27.

Vessels in non-territorial waters shall be considered as situated at the place of register.

ARTICLE 28.

The cargo of vessels in non-territorial waters shall be considered as being at the port of destination of the goods.

ARTICLE 29.

For jurisdictional purposes creditors' claims shall be considered as having their *locus* in the place where the contract must be executed.

ARTICLE 30.

The removal of personal property shall not affect the rights acquired according to the law of the place where it existed at the time of their acquisition.

The parties interested are obliged, however, to comply with all the requirements, both of substance and form, required by the law of the place whence taken, to acquire or preserve the said rights.

ARTICLE 31.

The rights acquired by third parties over the same property according to the law of the place whence removed after the removal and before complying with the said requirements, shall take precedence of the rights of the party having first acquired.

TITLE X.—*Of legal acts.*

ARTICLE 32.

The law of the place where contracts are to be executed shall determine whether they should be in writing and the character of the proper document.

ARTICLE 33.

The same law shall govern: (a) Their duration; (b) their nature; (c) their validity; (d) their objects; (e) their consequences; (f) their performance; (g) and finally everything relating to contracts in any respect whatsoever.

ARTICLE 34.

Consequently, contracts made concerning things certain and definite shall be governed by the law of the place of their location at the time of execution.

Those concerning things determined by their nature shall be governed by the law of the place of domicile of the debtor at the time of execution.

Those relating to things fungible shall be governed by the law of the domicile of the debtor at the time of their execution.

Those providing for the rendering of personal service: (a) If they relate to things, shall be governed by the law of the place where these existed at the time of execution. (b) If to services that are to be rendered in any specified place, they shall be governed by the law of the place where they are to be rendered, (c) In all other cases not herein specified, they shall be governed by the law of the place of domicile of the debtor at the time of execution.

ARTICLE 35.

A contract for barter or exchange of things located in different places under conflicting laws shall be governed by the law of the domicile of the contracting parties, if it be the same, at the time of the barter or exchange, or by the law of the place where the barter or exchange took place, if the domicile be separate.

ARTICLE 36.

Subsidiary contracts shall be subject to the law governing the principal obligation to which they refer.

ARTICLE 37.

The execution of the contract entered into through correspondence or by proxy shall be governed by the law of the place where the offer originated.

ARTICLE 38.

Obligations not arising out of contract shall be governed by the law of the place where the act, legal or illegal, whence they originated was performed.

ARTICLE 39.

The form of public documents shall be governed by the law of the place where they are executed.

Private documents shall be governed by the law of the place of performance of the contract in question.

TITLE XI.—*Of marriage settlements.*

ARTICLE 40.

Marriage settlements shall govern the relation between husband and wife respecting the property they had at the time of making the contract and that which is afterwards acquired in everything that is not prohibited by the law of the place of its location.

ARTICLE 41.

In the absence of special stipulations and as to all matters not provided for therein if any there be, and as to everything not prohibited by the law of the place where the property is located, the relations of the parties married to said property shall be governed by the law of the conjugal domicile that may have been selected, by mutual agreement, prior to entering into the marriage.

ARTICLE 42.

If no conjugal domicile shall have been selected beforehand, the aforesaid relations shall be governed by the law of the husband's domicile at the time the marriage is entered into.

ARTICLE 43.

A change of domicile does not affect the relations of husband and wife to the property, be it acquired before or after the change.

TITLE XII.—*Of estates.*

ARTICLE 44.

The form of a will shall be governed by the law of the place of location of the inheritable property at the time of the death of the decedent.

Nevertheless, a will registered in due form in any one of the contracting States shall be deemed valid in each of the others.

ARTICLE 45.

The *lex loci* shall govern: (a) Testamentary capacity; (b) that of an heir or legatee to inherit; (c) the validity and effects of the will; (d) the inheritable titles and rights of relatives and the survivor of the marriage bond; (e) as to whether any portion of an estate must, under the law, go to the heirs, and if so, the proportion thereof; (f) as to whether any, and if so, what portion, of the estate may be reserved; (g) finally, everything relating to legal or testamentary succession.

ARTICLE 46.

Debts payable in one of the contracting States shall be first liens upon the assets therein situated at the time of the death of the decedent.

ARTICLE 47.

Should said assets be insufficient for the liquidation of the aforesaid debts, the creditors shall share *pro rata* in the assets located in other places, without prejudice to the preferred right of local creditors.

ARTICLE 48.

When the debts must be liquidated in any locality where the decedent has left no assets the creditors shall exact *pro rata* payment from the assets located elsewhere, subject, however, to the same limitation established in the preceding article.

ARTICLE 49.

Bequests couched in generic terms and not designating the locality of satisfaction or payment shall be governed by the law of the place of domicile of the testator at the time of his death; they shall be realized from the property that he may have left in said domicile, and in default thereof, or its insufficiency, they shall be satisfied or paid *pro rata* out of all the other property of the decedent.

ARTICLE 50.

The duty of accounting shall be subject to the law governing the estate respecting which it is demanded.

Should the accounting concern real or personal property (other than money) it shall be limited to the estate of which said property is a part.

When it is with respect to a sum of money the amount shall be apportioned among the several estates in which the accounting heir is interested, in proportion to his share in each.

TITLE XIII.—*Of limitations.*

ARTICLE 51.

Absolute limitation of personal actions shall be governed by the law to which the obligations involved are subject.

ARTICLE 52.

Absolute limitations of real actions shall be governed by the law of the locality of the property subject to the lien.

ARTICLE 53.

If the property upon which the lien rests be movable and shall have changed location, the limitation shall be subject to the law of the locality in which the period of prescription shall have expired.

ARTICLE 54.

Prescriptions by the running of which title is acquired to movable and immovable property shall be subject to the law of the location of said property.

ARTICLE 55.

If the property be movable and shall have changed location, the limitation shall be subject to the law of the locality in which the period of prescription shall have expired.

TITLE XIV.—*Of jurisdiction.*

ARTICLE 56.

Personal actions should be brought before the courts of the locality by whose law the legal act, subject-matter of the proceedings, is governed.

They may also be brought before the courts of the defendant's domicile.

ARTICLE 57.

Petitions for judgments of absence should be addressed to the court of the alleged absentee's last domicile.

ARTICLE 58.

Proceedings respecting the capacity or incapacity of persons to exercise their civil rights should be conducted before the court of his domicile.

ARTICLE 59.

Actions, founded on the exercise of the paternal authority, and on that of guardians or curators over minors and persons suffering under disability and of the latter against the former, shall be heard in every thing affecting them personally before the courts of the country where the parents, guardians, or curators are domiciled.

ARTICLE 60.

Actions touching the property, its alienation or actions affecting the property of persons suffering under disability, should be heard before the courts of the place where the property is located.

ARTICLE 61.

The courts of the place of appointment of guardians or curators are competent to take cognizance of accountings by said guardians or curators.

ARTICLE 62.

Proceedings for nullity of marriage, limited and absolute divorce, and in general all questions affecting the personal relations of husband and wife, shall be instituted before the courts of the marital domicile.

ARTICLE 63.

All questions arising between husband and wife concerning alienation, or any other acts affecting the matrimonial possessions, the courts of the place where the property is located shall be competent to determine.

ARTICLE 64.

The courts of the place of residence of the parties shall be competent to take cognizance of the provisions of article 24.

ARTICLE 65.

Proceedings concerning the existence and dissolution of a partnership should be brought before the courts of the place of its domicile.

ARTICLE 66.

Trials originating in an inheritance consequent upon death shall be brought before the courts of the place where the inheritable property is located.

ARTICLE 67.

Realty actions, and those known as mixed actions, should be instituted before the courts of the locality where the thing at issue is situated.

Should said actions cover things located in different places, the proceedings should be brought before the courts of the place where each may be located.

TITLE XV.—*General provisions.*

ARTICLE 68.

It is not indispensable to the enforcement of this treaty that it be ratified simultaneously by all the contracting nations. The nations approving it will communicate such approval to the Governments of the Argentine Republic and of the Republic of Uruguay, that they may notify the other contracting nations. This procedure shall take the place of diplomatic exchange.

ARTICLE 69.

The exchange once made in the form prescribed in the preceding article, this treaty shall remain in force, counting from such ratification, for an indefinite period.

ARTICLE 70.

Should any one of the contracting nations see fit to withdraw from this treaty or to introduce amendments therein, it shall notify the others; but said withdrawal shall not take effect until two years after notice thereof, a period within which efforts shall be made to arrive at a new agreement.

ARTICLE 71.

The provisions of article 68 are extended so as to include those nations, which, not having representation in this Congress, may wish to accept the present treaty.

In witness whereof the Plenipotentiaries of the aforesaid nations sign and seal five copies hereof, at Montevideo, this — day of the month of —, of the year one thousand eight hundred and eighty-nine.

APPENDIX 2.

TREATY ON INTERNATIONAL COMMERCIAL LAW.

As approved by the South American Congress at Montevideo on February 4, 1889.

TITLE I.—*Of commercial acts and merchants.*

ARTICLE 1.

All lawful acts shall be considered as either civil or commercial according to the law of the country where they are performed.

ARTICLE 2.

What shall constitute parties merchants shall be determined according to the law of the country where their business is located.

ARTICLE 3.

Merchants and commercial Clerks shall be subject to the commercial laws of the country wherein they ply their vocation.

TITLE II.—*Of partnerships.*

ARTICLE 4.

Partnership contracts shall be subject as regards form and the legal relations between partners, and between the partnership and third parties, to the law of the country where the partnership has its business domicile.

ARTICLE 5.

Partnerships or associations having the character of a legal person shall be subject to the laws of the country where they are domiciled; they shall be recognized of right as such in the States, and empowered to exercise their civil rights therein and plead and be impleaded before the courts.

But in the exercise of functions incident to the purposes of the association they shall be subject to the provisions of the law in force in the State wherein they propose to carry them into effect.

ARTICLE 6.

Branch offices or agencies established in one State by a partnership having its domicile in another, shall be considered as domiciled in the place wherein their business is conducted, and be subject to the jurisdiction of the local authorities in everything concerning their business operations.

ARTICLE 7.

The courts of the country wherein the partnership has its legal domicile shall take cognizance of litigation arising between the partners or that may be brought by third parties against the partnership.

However, if a partnership domiciled in one State carry on operations in another, which operations should give rise to litigation, this may be initiated before the courts of the latter State.

TITLE III.—*Of land, maritime, and life insurance.*

Insurance contracts on land and on river or inland water transportation shall be subject to the law of the country wherein the property insured is situated at the time of the execution of the contract.

ARTICLE 9.

Maritime and life insurance shall be subject to the laws of the country where the insurance company, its branch offices or agencies are domiciled, as provided in article 6.

ARTICLE 10.

The courts of the country where the insurance companies have their legal domicile shall take cognizance of all causes instituted against said companies.

If said companies have branch offices in other States the provisions of article 6 shall govern in the premises.

TITLE IV.—*Of collisions, foulings, and shipwrecks.*

ARTICLE 11.

Collisions and foulings of vessels shall be subject to the law of the country within whose waters they happen, and they shall be subject to the jurisdiction of the courts of the same.

ARTICLE 12.

In case of collisions or foulings in non-jurisdictional waters the law of the country of register shall govern.

In case the vessels should be registered in different nations, the law of the country most favorable to the respondent shall prevail.

In the case set forth in the foregoing section the jurisdiction in the premises shall belong to the courts of the country first reached.

Should the vessels arrive at ports situated in different countries, the jurisdiction of the authorities first taking cognizance of the matter shall prevail.

ARTICLE 13.

In cases of shipwreck the authorities of the territorial waters in which the accident takes place shall have jurisdiction.

Should the shipwreck occur in non-jurisdictional waters, jurisdiction shall be assumed either by the courts of the country whose flag the vessel carries, or those of the respondent's domicile at the time of the institution of proceedings, at the election of the libellant.

TITLE V.—*Of chartering.*

ARTICLE 14.

Chartering contracts shall be subject to and governed by the laws and courts of the country where the shipping agency with which the chartering party has contracted is located. If the object of the chartering contract be the transportation of merchandise or passengers between ports of one state it shall be governed by the laws of the same.

ARTICLE 15.

If there be no shipping agency established at the institution of proceedings the chartering party shall bring his action before the courts of the domicile of any of the parties interested in or representing the said agency.

If the shipping agency be the plaintiff it may institute proceedings before the courts of the state where the chartering party is domiciled.

TITLE VI.—*Of bottomry bonds.*

ARTICLE 16.

The contract of loans on bottomry bonds shall be governed by the law of the country where the loan is made.

ARTICLE 17.

The amounts raised on bottomry bonds, for the necessities of the last voyage, shall have preference in the order of payment over debts contracted for the construction or purchase of the vessel and money raised on said bottomry in a previous voyage.

Loans made during the voyage shall have preference over those made before the sailing of the vessel; and if there should be many during the course of the voyage the preference shall be established in the inverse order of dates, that which follows having preference over that which precedes.

Loans made at ports entered in distress and during the stay therein shall be added together and paid *pro rata*.

ARTICLE 18.

Questions arising between the creditor and debtor shall be subject to the jurisdiction of the courts of the locality where the property upon which the loan has been made is situated.

In case the lender should be unable to make good the amount loaned out of the property subject to the payment, he may bring his action before the courts of the place where the contract was executed, or those of the debtor's domicile.

TITLE VII.—*Of seamen.*

ARTICLE 19.

Shipping articles shall be subject to the law of the country where the contract is executed.

ARTICLE 20.

All matters touching the government of the vessel and the obligations of officers and seamen shall be subject to the laws of the country of register.

TITLE VIII.—*Of damages.*

ARTICLE 21.

General or ordinary damages shall be subject to the law of the country of register of the vessel wherein they occurred.

Notwithstanding the provisions of the foregoing section, if these damages have been sustained in the jurisdictional waters of any one state they shall be subject to the laws thereof.

ARTICLE 22.

Particular damages shall be subject to the law regulating the freightage contract of the merchandise damaged.

ARTICLE 23.

The courts of the ports of destination of the voyage shall take cognizance of actions for ordinary damages.

ARTICLE 24.

Actions for particular damages shall be brought before the courts of the country where the cargo is delivered.

ARTICLE 25.

If the voyage be abandoned before the sailing of the vessel, or, if after sailing it should be necessary to return to the port of loading, the courts of the country wherein said port is situated shall take cognizance of actions for damages.

TITLE IX.—*Of bills of exchange.*

ARTICLE 26.

The form of drawing, endorsing, accepting, and protesting of a bill of exchange shall be governed by the law of the localities where such acts are respectively executed.

ARTICLE 27.

The legal relations between the drawer and payee of a bill of exchange, resulting from the drawing thereof, shall be governed by the law of locality where the bill is drawn; those resulting between the drawer and the drawee shall be subject to the law of the domicile of the latter.

ARTICLE 28.

The obligations of the acceptor with respect to the holder, and the pleas which he may set up, shall be regulated by the law of the place of acceptance.

ARTICLE 29.

The legal effects produced on the endorser and endorsee by the act of endorsement are governed by the law of the place of negotiation or endorsement.

ARTICLE 30.

The greater or less extent of the obligations of the respective endorsers shall in no wise impair the rights primarily acquired by the drawer and acceptor.

ARTICLE 31.

The warranty bond (*aval*) shall be subject to the law applicable to the obligation guarantied.

ARTICLE 32.

The legal effects of acceptance by intervention shall be governed by the law of the locality where the third party intervened.

ARTICLE 33.

The provisions of this title shall govern, in so far as they shall be applicable, commercial drafts, bills, and notes.

ARTICLE 34.

Questions arising between parties intervening in the negotiation of a bill of exchange shall be determined before the courts of the respondent's domicile at the date of the incurring of the obligation, or at the time of the bringing of the action.

TITLE X.—*Of bankruptcies.*

ARTICLE 35.

The courts of the domicile of a bankrupt shall take cognizance of suits in bankruptcy, even though the party adjudged bankrupt shall incidentally carry on business in another nation, or maintain there agencies or branch offices which do business on the account and on the responsibility of the principal house.

ARTICLE 36.

If the bankrupt shall have two or more independent business houses in different jurisdictions, the courts of the localities where the said houses are situated shall be competent to assume jurisdiction over the bankruptcy of each of them.

ARTICLE 37.

The bankruptcy having been adjudged in one country, in the event stated in the foregoing article, the precautionary measures taken in the case shall be made effective on the property of the bankrupt in other States, if any, without prejudice to the rights granted to local creditors by the following articles.

ARTICLE 38.

The precautionary measures once taken by means of letters rogatory, the judge to whom the letters are addressed shall publish, for the period of sixty days, advertisements in which he shall set forth the adjudication in bankruptcy and the precautionary measures that have been taken.

ARTICLE 39.

The local creditors may, within the time designated in the foregoing article, counted from the day following the first publication of the advertisement, institute new proceedings in bankruptcy against the bankrupt in another State, or institute against him such civil actions as may be proper under the law. In such case the several proceedings in bankruptcy shall follow independently, and each case shall be subject, respectively, to the laws of the country in which it is instituted.

ARTICLE 40.

Local creditors who have the right to be represented at the proceedings in a country shall be understood to mean those whose debts should be satisfied in said country.

ARTICLE 41.

In case there shall be several proceedings in bankruptcy instituted under the provisions of this title, the money balance which may result in favor of the bankrupt in one State shall be placed at the disposal of the creditors of the other; to this end the courts of each State shall take cognizance thereof.

ARTICLE 42.

In case one sale proceeding in bankruptcy is had according to the provisions of article 35, or because the local creditors have not exercised the rights granted them by article 39, all the creditors of the bankrupt shall present their claims and demand their rights before the judge or court which has made the adjudication in bankruptcy.

ARTICLE 43.

Even in the case of only one proceeding in bankruptcy the mortgagee creditors secured before the adjudication in bankruptcy may exercise their rights before the courts of the country in which the property mortgaged or pawned is situated.

ARTICLE 44.

The preference of local credits in the country where the bankruptcy occurred, and which were acquired previous to the adjudication in bankruptcy, shall be respected even in case the property subject to the said preference shall be transferred to another jurisdiction and there exist therein, against the said bankrupt, adjudications in bankruptcy.

ARTICLE 45.

The authority of the trustees or legal representatives of the creditors shall be recognized in all the States, if they be so recognized by the law of the country within whose jurisdiction the proceedings by the creditors they represent were instituted; they being authorized to exercise in all places the authority granted them by said law and this treaty.

ARTICLE 46.

In case several proceedings in bankruptcy have been instituted, the court in whose jurisdiction the bankrupt resides shall be competent to adjudge all measures of a civil character affecting him personally.

ARTICLE 47.

The discharge of the bankrupt shall take effect only when it shall have been granted in all the proceedings instituted against him.

ARTICLE 48.

The provisions of this treaty respecting proceedings in bankruptcy shall apply to joint stock companies whatever the form for liquidation that may be established for said companies by the contracting States in the case of suspension of payments.

TITLE XI.—*General provisions.*

ARTICLE 49.

It is not indispensable to the enforcement of this treaty that it be simultaneously ratified by all the nations signing. The nations approving it will communicate such approval to the Governments of the Argentine Republic and of Uruguay, that they may notify the other contracting nations. This procedure shall take the place of formal diplomatic exchange.

ARTICLE 50.

The exchange once made in the manner provided in the preceding article, this treaty shall remain in force, counting from such ratification, for an indefinite period.

ARTICLE 51.

Should any of the contracting nations see fit to withdraw from the treaty or to introduce amendments therein, it shall notify the others; but said withdrawal shall not take effect until two years after notice thereof, a period within which efforts shall be made to arrive at a new agreement.

ARTICLE 52.

The provisions of article 49 are extended so as to include those nations which, not having representation in this Congress, may wish to accept the present treaty.

APPENDIX No. 3.

TREATY OF THE LAW OF PROCEEDINGS.

[As approved by the South American Congress, at Montevideo, on January 4, 1889.]

ARTICLE 2.

Evidence shall be admitted and weighed according to the law governing the subject-matter of the legal proceedings, excepting, however, that class of evidence which, because of its nature, is inadmissible by the law of the place of trial.

TITLE II.—*Of legalization.*

ARTICLE 3.

Judgments or homologated awards rendered in matters civil and commercial, registered instruments, and other authentic documents issued by the officials of one State, and letters requisitorial and rogatory shall have full effect in the other contracting nations, according to the stipulations of this treaty, whenever they shall be duly certified.

ARTICLE 4.

The certification shall be considered to be in due form whenever it conforms to the law of the country of issue, and is authenticated by the diplomatic or consular agent, who in said country or locality shall be accredited by the government of the State within whose territory it is to be used.

TITLE III.—*Of the execution of requisitions, judgments, and awards.*

ARTICLE 5.

Judgments and the awards of arbitrators rendered in matters civil and commercial in one of the contracting States shall have, within the territory of the other States, the same force and effect as in the country rendering them, provided they comply with the following requirements:

(a) The judgment or award must be pronounced by a competent tribunal exercising international functions.

(b) It must have the character of a final judgment in the State wherein it was rendered.

(c) That the party against whom it is rendered shall have been legally summoned and appeared, or adjudged in default, according to the law of the country where the proceedings are had.

(d) It must not be in opposition to the police regulations of the country where executed.

ARTICLE 6.

The documents necessary to the execution of judgments or award of arbitrators are the following:

(a) A full copy of the judgment or award.

(b) A copy of the papers showing that the parties have been summoned.

(c) An authentic copy of the decree showing that the judgment or award is in the nature of a final judgment and of the laws upon which said decree is founded.

ARTICLE 7.

The rules governing the execution of judgments or award, and the proceedings occasioned by such execution, shall be those prescribed by the law of procedure of the State where it is demanded.

ARTICLE 8.

Proceedings not in the nature of contested litigation, such as inventories, the opening of wills, valuations or other like acts, had in one State, shall have the same effect in the other States as if they had been had in their own jurisdiction, provided they comply with the requirements prescribed in the preceding articles.

ARTICLE 9.

Requisitions and letters rogatory requesting the issuing of notice, the taking of depositions, or the performing of any other judicial functions, shall be executed in the contracting States, provided said requisitions or letters rogatory comply with the conditions established in this treaty.

ARTICLE 10.

When the requisitions or letters rogatory relate to attachments, appraisements, inventories, or to any other preventive measures, the judge addressed shall order all the necessary steps regarding the appointment of experts, appraisers, receivers, and, in general, everything that may lead to the full execution of such letters or requisitions.

ARTICLE 11.

Requisitions and letters rogatory shall be issued in accordance with the laws of the country issuing the same.

ARTICLE 12.

Parties interested in the execution or requisitions or letters rogatory may appoint attorneys in fact, the expense occasioned by said attorneys and the writs being borne by said parties.

TITLE IV.—*General provisions.*

ARTICLE 13.

It is not indispensable to the enforcement of this treaty that it be simultaneously ratified by all the contracting nations. The nations approving it will communicate such approval to the Governments of the Argentine Republic and of the Republic of Uruguay that they may notify the other contracting nations. This procedure shall take the place of diplomatic exchange.

ARTICLE 14.

The exchange once made in the manner provided in the preceding article, this treaty shall remain in force counting from such ratification for an indefinite time.

ARTICLE 15.

Should any one of the contracting nations see fit to withdraw from this treaty or to introduce amendments therein, it shall notify the others; but said withdrawal shall not take effect until two years after notice thereof, a period within which efforts shall be made to reach a new agreement.

ARTICLE 16.

The provisions of article 13 are extended so as to those nations which, not having representation in this Congress, may wish to accept the present treaty.

In witness whereof the plenipotentiaries of the aforesaid nations sign and seal — copies hereof at Montevideo this — day of the month of January of the year one thousand and eight hundred and eighty-nine.

ADDITIONAL PROTOCOL.

The plenipotentiaries of the Governments of —, convinced of the advisability of establishing general rules for the enforcement of the laws of any of the contracting States in the jurisdictions of the others, in the cases determined by the treaties concluded on the several matters of private international law, have agreed as follows:

ARTICLE 1.

The laws of the contracting States shall be enforced in the cases that may arise, be the parties interested in the matter under consideration either native or foreign.

ARTICLE 2.

The enforcement thereof shall be made by the judge sitting in the case on his own motion, without prejudice to the parties alleging and proving the existence and provisions of the law cited.

ARTICLE 3.

All remedies allowed by the code of procedure of the place of judgment for cases decided under its own laws shall also be allowed for those cases decided under the laws of any of the other States.

ARTICLE 4.

The laws of the other States shall never be enforced as against the political institutions, police regulations, or customs of the place where the case is tried.

ARTICLE 5.

In conformity with the provisions of this protocol, the Governments bind themselves to transmit to each other two authentic copies of the laws now in force, and which may be passed in the future in their respective countries.

ARTICLE 6.

The Governments of the signing States shall declare, upon approving the treaties concluded, whether they accept the adherence of the nations not invited to Congress, in the same manner as that of those, who having concurred in the purpose of the Congress, have not taken part in its deliberations.

ARTICLE 7.

The provisions of the foregoing articles shall be considered as an integral part of the treaties to which they refer, and their duration shall be the same as that of said treaties.

II.

CLAIMS AND DIPLOMATIC INTERVENTION.

One of the honorable delegates for the Republic of Venezuela has presented two resolutions setting forth different declarations respecting certain cases in which claims against the Government of a country by foreigners residing therein should be considered as inadmissible. In case the aforesaid declarations should be considered in the form in which they have been presented, the committee charged with the preparation of a report thereon would submit to the consideration of their author, and to the decision of the Conference, some additions and amendments which, to its mind, it would be necessary to insert. It does not do so, however, because it believes that instead of entering into special matters of detail, what should be done is to discover and determine the true principle which should legally govern in the premises, and to recommend its adoption as the only key to a full and perfect solution of all the questions which may arise in this behalf.

The committee well understands that in those times, when the idea was still dominant that the foreigner was an enemy against whom was enforced (according to the provisions of the Roman public law) continuous authority, certain doctrines should be established to protect him from the consequences of that feeling of manifest hostility. It can well understand that when the exercise of civil rights was limited to natives it should be necessary to introduce principles and proceedings by means of which the foreigner might be afforded some defense in the precarious position in which the then generally prevailing ideas placed him; and it can understand, in fine, that when intercourse between countries was less frequent, when civilization in America was but little advanced, and a spirit of isolation, a feeling of distrust, and a sentiment of egotism dominated, all of which is contrary to the equal enjoyment of the guaranties and benefits of the law, the foreigner should be forced to remain with his gaze fixed upon the National Government so as to neutralize the effects of the aversion and repugnance with which he was received. But it can not, by any means, understand (theories and sentiments, circumstances and principles of legislation respecting the rights of the foreigner having changed in every particular) that principles should have any weight which can only serve to create distrust, to foment estrangement, to prevent assimilation, and to protect the schemes of worthless people—a protection which is nearly always asked with the sole object of profiting thereby—and which keeps the Governments in a constant state of excitement which may occasion disagreeable incidents of even graver consequences.

The committee gladly recognizes that the Christian, liberal, and humane principle is, that the foreigner should not be inferior to the native in the exercise and enjoyment of all and each of the civil rights, but it can not understand that the foreigner should enjoy considerations, prerogatives, or privileges denied to the native. It repels openly any restriction which places the foreigner in a condition inferior to that vouchsafed by the law to the native, but it likewise repels the pretension that the foreigner should be superior to the native; that he should be a perpetual menace to the territory whose protection he seeks and

* NOTE.—Reports II and III were adopted by a majority of the Conference, the delegates from the United States voting in the negative.

whose advantages he enjoys; that recourse to a foreign sovereignty which makes itself felt in an independent country should serve as a means of self-advancement whenever improper demands are not satisfied.

Nowadays, when our people receive the foreigner with open arms; to-day, when they deny him no right and recognize that an intelligent, hard-working, and honorable immigration is the most potent element of civilization and greatness of prosperity and advancement; to-day, when we are far removed from barbarous times, and the foreigner is not the enemy but the brother to whom are opened wide the doors of the most generous hospitality, those doctrines founded upon bases wholly inadmissible are a veritable and shameful anachronism.

None of the advancements of modern civilization is unknown to the republics of America. Granting the foreigner the same rights, neither less nor more, that the native enjoys, they do all they can and should do. And if these rights are not enough, and if they are not found to be sufficiently guaranteed and to be placed beyond the pale of abuse; if there is danger that abuse will some time be committed, as there is danger of earthquakes, of floods, of epidemics, of revolutions, and of other misfortunes, the foreigner should have considered it all before deciding to live in a country where he may run such risks. And on the other hand, supposing that some abuse is committed, that abuse is not without penalty and correction, as that committed against the native is not left remediless; and, moreover, it has attached to it other penalties more efficacious, that of moral reprobation, the judgement formed by other nations, the separation of all those who under other conditions would assist in making its elements of production fruitful, and, in consequence, isolation, poverty, and universal condemnation.

A nation does not with impunity deviate from the line of duty marked out by ethics, law, and civilization; and between the harm which may occasionally result from such deviation and the greater and innumerable harms caused by the other practice, the committee does not hesitate to choose. If it is wrong to once in awhile commit abuses against the native or the foreigner, worse a thousand times is the example of scandalous claims concocted and sustained by the malignity and the ingratitude of a pernicious man, and, the solution of which is made to depend on the judgment or the will of the stronger. For, as a final result, there is nothing but the uncalled-for intervention of the stronger, which, constituted into an impassioned defender of its citizens, imposes its will and ideas as law, and compels the weaker to do his bidding. And this unwarranted verging upon the sovereignty of the others, and this stimulant to a sentiment of native aversion, undoubtedly produces far more lamentable consequences.

The foreigner, with all the rights of the native, with no right less, yet with no right more, is the principle which, to the mind of the committee, is the base upon which every theory in the premises should rest—the starting point for practical conclusions in so interesting a matter. If the Government is responsible to its citizens for infractions of the Constitution or the laws, committed by agents of the public authority in the discharge of their duties, it will be equally responsible to foreigners, and *vice versa*.

If the Government is not responsible to its citizens for damages caused by insurgents or rebels, neither will it be responsible to foreigners, and *vice versa*. If the natives have any protection against the decisions and procedure of the courts, the same right shall be granted foreigners. In a word, in everything touching the exercise of civil

rights, natives and foreigners shall be on a perfectly equal footing—equal rights, equal obligations, equal access to the authorities, equal procedure, equal appeals; but in no case shall the foreigner be superior—an exasperating condition which may establish an indefensible and inexplicable duality of sovereignties and authorities. The foreigner should not appear like a spoiled child, always encircled by the arms of the Government of his nationality to prevent him from stumbling and injuring himself. He should himself judge and decide where it is advisable for him to go and where not, and try to live peaceably under the shelter of the laws of the country he may select as a place of residence, and the protection of civilization and morality. To enjoy all the privileges and all the considerations of natives, to be treated like them, is all to which the foreigner can aspire; and this is what is gladly conceded him.

As a result of these reflections, the committee propose the following resolutions, to wit:

RECOMMENDATIONS AS ADOPTED.*

The International American Conference recommends to the Governments of the countries therein represented the adoption as principles of American international law, of the following:

(1) Foreigners are entitled to enjoy all the civil rights enjoyed by natives; and they shall be accorded all the benefits of said rights in all that is essential as well as in the form or procedure, and the legal remedies incident thereto, absolutely in like manner as said natives.

(2) A nation has not, nor recognizes in favor of foreigners, any other obligations or responsibilities than those which in favor of the natives are established, in like cases, by the constitution and the laws.

III.

ON THE NAVIGATION OF RIVERS.

Some of the honorable delegates have proposed that the Conference make a recommendation to the several nations therein represented, to adopt the principle that the navigation of rivers be free to all the nations whose territories their waters bathe, and that the sovereign States bordering on the headwaters of such rivers shall have free passage to the sea by means thereof.

The first point that has presented itself for the examination of the committee to whom the proposition alluded to was referred, is whether it is within the province of this Conference to entertain matters which, like that mentioned, belong to public international law. The committee has no doubts upon the point; it believes that although it might be inopportune to enter indiscriminately upon all the subjects of the public law of nations, the right of this Conference to consider and discuss them and to decide upon the recommendation which it considers should be made, can not be gainsaid. Without going outside of the terms of the act of the Congress of the United States which authorized the calling together of this Conference, it may be plainly demonstrated that subjects like that under consideration are in no wise beyond its compe-

* See minority report of the delegates from the United States to follow:

petency. The second section of the act to which the committee has just made reference, provides that the President of the United States, in forwarding the invitations to the several Governments of America, should set forth that the Conference is called to consider :

First. Measures that shall tend to preserve the peace and promote the prosperity of the several American States.

And—

Eighth. To consider such other subjects relating to the welfare of the several States represented as may be presented by any of said States which are hereby invited to participate in said conference.

Any subject, then, which by any delegate may be submitted to the decision of the Conference, if it relates to the welfare of the nations therein represented, is fully within the programme of subjects which is the object of its deliberations. And if we consider, moreover, the character with which the majority of the delegates to this Conference are invested, there can not be the shadow of a doubt of their ample faculty to bring into the field of discussion subjects of this nature.

After this explanation it behoves the committee to state that, in its judgment, no difficulty presents itself to its making a recommendation in the sense proposed by the signers of the resolution.

This free navigation appears to be a natural right; it is recognized by writers on international law of the highest repute in Europe as well as in the United States and Spanish America; and it accords with what is established in the decisions of noted European congresses and in the articles of different treaties touching the navigation of important rivers. This is the principle also which the Government of the United States has vigorously and victoriously sustained on more than one occasion; and, finally, the principle is in keeping with the fraternal relations which should exist between the several American nations that will not deny to their neighbors that which will benefit them and which is even indispensable, and does not cause any injury or harm.

For these reasons, which have been fully set forth in the report of one of the delegates who presented the resolution, and which reasons the committee does not here reproduce, because they are so well known to all, it proposes the following conclusion :

Whereas it is an admitted principle of international law, founded on reasons of justice and equity, and which the general advantage demands, that the navigation of rivers shall be free to all nations whose territories border on them, and for those nations which have no other means of reaching the sea the International American Conference

RECOMMENDATIONS AS ADOPTED.*

Resolves to recommend to the several Governments of the nations represented in this Conference to adopt, declare, and recognize the following principles :

(1) That rivers which separate several States, or which bathe their territory, shall be open to the free navigation of the merchant marine or ships of war of the riparian nations.

(2) That this declaration shall not affect the jurisdiction nor the sovereignty of any of the riparian nations either in time of peace or war.

* See minority report of delegate from the United States, to follow.

IV.

MINORITY REPORT ON CLAIMS AND DIPLOMATIC INTERVENTION FROM
THE DELEGATE FROM THE UNITED STATES.

I can not concur in the majority report for the following reasons:

I object to the term "American International Law." There can no more be an American international law than there can be an English, a German, or a Prussian international law. International law has an old and settled meaning. It is the common law of the civilized world, and was in active recognized and continuous force long before any of the now established American nations had an independent existence. We accepted it as one of the conditions of our recognition, and we have no right to alter it without the consent of the nations who really founded it and who are and must be to-day, notwithstanding our increasing power and consequence, large and equal factors in its maintenance.

I of course recognize the right of any one nation or combination of nations to suggest such amendments and improvements as the progress of civilization renders advisable; but to make such changes a part of international law requires the consent of the civilized world.

Nor do I deny the right of any two or more nations to adjust their general political relations according to principles of which they approve, but this obligation is simply a treaty obligation, is confined in its action to the contracting parties, and can not exempt them or either of them from the larger and older obligations of international law, should they ever conflict.

Even the four points of the Congress of Paris, which were adopted by all the great powers of Europe, do not claim to be international law and are admitted to be binding only upon and between those nations who were signatories of the treaty.

In the contention over the Alabama claims England and the United States did agree that the decision should be governed by the application of certain principles which it was admitted were not principles of existing international law, but to be accepted *quoad hoc* as the rule of judgment in the special case.

And it is very noticeable that notwithstanding the declaration of such intent, no effort has been made in either case to widen these special transactions into alteration or amendment of international law. I assume, therefore, that the object of this reference is not to establish an American international law, in contrast or conflict with an European international law, but to suggest certain modifications as desirable, and to agree that, pending their incorporation into the international law of the world, we will, among ourselves, agree to be bound by the principles embodied in these resolutions.

Assuming this, the question is: Is it judicious for us to adopt these resolutions as the rule of action between ourselves and to make the necessary effort to have them incorporated into the international law of the world? For it is clear that they are either portions of existing international law, in which case we are already under their protection and bound by their obligations, or they are not existing international law, and then it is not in our power to make them so.

These recommendations cover two subjects:

(1) The subject of reclamation by foreigners against a Government in which they reside or with which they have had transactions.

(2) The subject of the navigation of rivers running as boundaries be-

tween or running in different portions of their course through different territories.

I shall first consider the subject of reclamation.

My objection to the very earnest and eloquent report of the majority is not to its details, but to the irresistible conclusion of its logic, which I can not interpret in any other sense than the entire and absolute denial of the right of diplomatic reclamation between independent governments in vindication or protection of the rights of its citizens residing in foreign countries. It is possible that cases of direct violence or tort by the government itself may be excepted, but not clearly.

The foreigner with all the rights of the native [says the report], with no right less, yet with no right more, is the principle which, to the mind of the committee, is the base upon which every theory in the premises should rest. The starting point for practical conclusions in so interesting a matter. If the Government is responsible to its citizens for infraction of the Constitution or the laws, committed by agents of the public authority in the discharge of their duties, it will be equally responsible to foreigners, and *vice versa*. If the Government is not responsible to the citizen for damages caused by insurgents or rebels, neither will it be responsible to foreigners, and *vice versa*. If the natives have any protection against the decision and procedure of the courts, the same right shall be granted foreigners. In a word, in everything touching the exercises of civil rights natives and foreigners shall be on a perfect equal footing, equal rights, equal obligations, equal access to the authorities, equal procedure, equal appeals, but in no case shall the foreigner be superior, an exasperating position which may establish an indefensible duality of sovereignties and authorities. The foreigner should not appear like a spoiled child, always encircled by the arms of the Government of his nationality to prevent him from stumbling and injuring himself.

Putting aside the supposed condition, existing in fact nowhere, in which "foreigners are entitled to enjoy all the civil rights enjoyed by natives," the above forcible and plausible statement can not be accepted without most important limitations. It may be admitted, but with serious reservations, that the resident foreigner in all contracts with private natives and in relation to violations of municipal law has no right to ask more protection than is given to the native citizen. But even here there is the underlying assumption that what is granted by native law and procedure, what is given to the native citizen is substantial justice. If under any peculiar law, under any absolutism of procedure, under any habit or usage of traditional authority to which natives are accustomed and willing to submit, the native process or judgment does not afford this substantial justice, the right of the foreigner to such substantial justice would be nevertheless complete, and how can it be assured to them? But if this be so even in cases of private contention, how is it with the cases where the reclamation of the foreigner is against the Government itself?

Into what court will the Government allow the sovereignty of the nation to be called to answer its responsibility to the claimant, and how is its judgment to be enforced? What, under such a theory, becomes of a native merchant in a belligerent country? What guaranty has the foreigner against the forced loan to which a native citizen may be bound patriotically to submit? Take the case of the foreign bondholder furnishing to the Government invaluable assistance at critical times where the debt is neither denied nor repudiated, but simply and persistently left unpaid. Has any Government hesitated to protect by diplomatic reclamation the interests of its subjects, which no foreigner can enforce in the courts of his debtor? Take the case where the persons and property of foreigners have not received the protection to which their relation with the native Government entitles them. Is it conceivable that so great a departure from ancient usage and recognized international law would be accepted?

It will be recollected that very recently the experiment has been tried. In 1888, only two years ago, the Ecuadoran Congress passed a law decreeing as follows :

ARTICLE I.

The nation is not responsible for losses and damages caused by the enemy either in civil or international war or by mobs, riots, mutinies, or for those which may be caused by the Government in its military operations or in the measures it may adopt for the restoration of public order. Neither natives nor foreigners shall have any right of indemnity in such cases.

ARTICLE II.

Neither is the nation responsible for losses or damages consequent upon measures adopted by the Government towards natives or foreigners in involving their arrest, banishment, internation, or extradition whenever the exigencies of public order or a compliance with treaties with neighboring nations require such action.

ARTICLE III.

The payment of indemnities not excluded by the foregoing articles can not be made except in conformity with the law of public credit and after a previous judgment by a competent judicial officer.

ARTICLE IV.

Neither foreigner nor native shall have the right of presenting claims to the legislature which were previously rejected by a former Congress.

ARTICLE V.

Foreigners who may have filled positions or commissions which subjected them to the laws and authorities of Ecuador can make no reclamation for payment or indemnity through a diplomatic channel.

The diplomatic corps at Quito protested against the act as contrary to the law of nations. On October 23, 1888, the State Department addressed the following instructions to the minister of the United States. After referring to the various articles of what it terms "the extraordinary law" it proceeds :

It is unnecessary to quote further provisions of the statute to show that it is subversive of all the principles of international law. This is so plain that it does not require or admit of argument. By such a declaration of rules for the guidance of her conduct in international relations, Ecuador places herself outside of the pale of international intercourse. It can not be supposed that she will persevere in such a course, which would be destructive of her commerce and render amicable relations with her impossible.

You are, therefore, instructed to say to the Ecuadorian Government that the provisions of the law in question have been read by this Department with regret, and that the United States could never acquiesce in any attempt on the part of that Government to use such a statute as an answer to a claim which this Government had presented.

Now, while the conclusions and argument of the report do not make specific reference to this legislation, it does seem to me that its provisions would be generally supported both by the language and resolution. The second resolution reads thus :

A nation has not, nor recognizes in favor of foreigners any other obligations or responsibilities than those which, in favor of the natives, are established by the constitution and the laws.

I can put but one interpretation upon this language, and that is that whatever be the complaint of a resident foreigner against the Government under whose jurisdiction he is residing, he has no right in protection of his interests other than such as the Government may have pro-

vided in the way of judicial trial or executive appeal to its own citizens, and this principle once admitted, of course there follows the absolute exclusion of diplomatic reclamation; for the report says:

None of the advancements of modern civilization is unknown to the Republics of America; granting the foreigner the same rights, neither less nor more, than the native enjoys, they do all they can and should do, and if their rights are not enough, and if they are not found to be sufficiently guaranteed, and to be placed beyond the pale of abuse; if there is danger that abuse will sometimes be committed, as there is danger of earthquakes, of floods, of epidemics, of revolutions, and other misfortunes, the foreigner should have considered it all before deciding to live in a country where he runs such risks.

I am willing to admit that there are cases in which this appeal of a foreigner to have the protection of his own country has been abused—that there may be cases in which the lapse of time, the loss of records, the insufficiency of evidence, the confused and revolutionary character of the circumstances under which the claims may be alleged to have arisen, all combine to diminish the equities of a diplomatic reclamation. But these are rare and are always subject to the scrutiny of the reclaiming Government, and if there is a subject upon which nations are proverbially cautious it is the risk of involving national interests and incurring risks of provoking international difficulties in vindication of the violation of the rights of private individuals. And I can say confidently, with no inconsiderable knowledge of the diplomatic reclamations made by the Government of the United States, that the large majority of the claims which it has become the duty of the United States Government to press upon foreign nations has been in behalf of such claimants as the report describes, well founded in equity, reasonable in demand, and of singular temperance in tone.

Those claims have represented the courage and enterprise and capital of a shrewd, venturesome, but singularly intelligent and broad class of men. They have ventured much, not it is true without hope of reward, but very much that did substantial work in building up large industries, in sustaining struggling Governments, and in aiding other nations in their efforts at independence. And every day, as the world comes closer together, this community of enterprise, this transfer of labor and capital to do the work of other nations is spreading, and becoming not merely private and inconsiderable contracts, but large transactions, involving legislative action, Government intervention, and national responsibility.

The narrow technicality and the unavoidable prejudices of municipal law are growing too small for affairs of such magnitude.

And if there is a noticeable fact in the history of international claims, it is that the almost certain result of diplomatic reclamation is the arbitration of an impartial tribunal, in which all the equities are carefully scrutinized and by which almost every contention has been solved by a compromise which relieves national irritation and satisfies individual justice. I am satisfied that within the last fifty years surer foundations for the establishment of a real international law by diplomatic reclamation, thus terminating in arbitration, have been laid than by any influence at work in the history of the world.

This system has given us a series of special decisions covering a multiplicity of cases arising from the developing necessities of closer national relations, which will become, sooner or later, a code of decisions to which appeal may safely be made. The time has not yet come, but come it must, when all differences not between government and government—for that I deem impossible, but between the citizens of one country and the government of another—will find a common and legal

tribunal to administer a recognized jurisdiction. But until that comes and as the surest and most efficient means to secure its coming is diplomatic reclamation seeking and finding arbitration.

I am unwilling to repeat the commonplace declaration, "*Romanus civis sum.*"

It has been distorted by the political declamation of that sort of passion which sometimes mistakes itself for patriotism; its truth has been abused by great and arrogant nations, and may be again. But human nature must be changed, and changed for the worse, before you can separate loyalty to the Government and protection to the citizen. And that flag had better be furled under which a citizen does not feel that he is safe against injustice.

With these views I can not concur in any opinions which diminish the right or reduces the power of a nation by diplomatic reclamation, which is the manifestation of its moral strength and vitality, to protect the rights and interests of its citizens.

MINORITY REPORT ON THE NAVIGATION OF RIVERS BY THE DELEGATE OF THE UNITED STATES.

With regard to this subject I have little to say. The majority report states, I think, with sufficient accuracy the general doctrine, although how far these rights of navigation belong to the world as against the riparian sovereignty has not perhaps been absolutely settled. And I would have to make some reservation as to the first declaration, "that rivers which separate several States or which bathe their territories shall be open to the free navigation of the merchant marine or ships of war of the riparian nations."

The old contention as to the limitation of the naval power of Russia in the Black Sea might well be revived on the course of a great continental river where the riparian owners were of very different degrees of strength. And in case of war questions might arise not easily answered; for I confess, with all my study of international law, I have not learned what, if any, outside of questions of pure humanity, are the limitations on the right of war, and history seems to me only to teach that law, as the skeptical Frederick said of Providence, is always on the side of the stronger battalions.

I think that the appreciation of the principle, now so generally recognized as not to need confirmation, had better be left to the wisdom of the riparian owners, whose interests will more surely lead to sagacious and amicable settlement of questions which may arise than any appeal to general principles.

I do not object to the committee expressing its views upon the resolutions which have been referred to it, but I can not concur in any resolution declaring their principles to be principles of American international law.

WILLIAM HENRY TRESCOT,
Delegate from the United States.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING

UNIFORM TREATIES

FOR THE

EXTRADITION OF CRIMINALS.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A report of the International American Conference on the extradition of criminals.

JULY 16, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith, for your information, certain reports on the subject of extradition, adopted by the International American Conference at its recent sessions in this city.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 15, 1890.

DEPARTMENT OF STATE,
Washington, July 15, 1890.

The PRESIDENT:

I have the honor to inform you that the International American Conference, recently in session in this city, adopted certain reports, containing recommendations on the subject of the extradition of criminals, which are herewith transmitted for the information of Congress.

Respectfully submitted.

JAMES G. BLAINE.

REPORT ON EXTRADITION.

[As adopted by the Conference April 15, 1890.]

The International American Conference resolves :

1st. To recommend to the Governments of the Latin American nations the study of the Treaty of Penal International Law made at Montevideo by the South American Congress of 1888, in order that within a year, to be counted from the date of the final adjournment of this Conference, they may express whether they adhere to the said treaty, and in case that their adhesion is not complete, which are the restrictions or modifications with which they accept it.

2d. To recommend at the same time that those Governments of Latin America which have not already made special treaties of extradition with the Government of the United States of North America, should make them.

APPENDIX.

DRAFT OF A TREATY ON INTERNATIONAL PENAL LAW.

[Adopted by the Congress of Montevideo.]

TITLE I.—*On Jurisdiction.*

ARTICLE I.

The crimes and offenses committed within the territorial jurisdiction of a nation shall be punished according to the laws of that nation; and the offenders, whatever their own nationality, or the nationality of the victim, or wronged party, may be, shall be subject to trial before the courts of the country where the offense was committed.

ARTICLE II.

Such violations of criminal law as are perpetrated in a State, but exclusively affect the rights and interests as guaranteed by the laws of another State, shall fall under the jurisdiction of the State affected by them, and shall be punished according to its laws.

ARTICLE III.

When an offense affects different States, the jurisdiction of the State in whose territory the offender is arrested shall prevail.

If the offender should seek shelter in a State different from the ones affected by his action, the jurisdiction of the State which asked first for the extradition shall prevail.

ARTICLE IV.

In the cases referred to in the preceding article, if there is only one offender there shall be only one trial, and the penalty to be imposed shall be the gravest one established by the penal laws of the different States concerned.

If the penalty found out to be the gravest should not be admitted in the State when the trial takes place, the nearest in gravity shall be imposed.

The court shall, in all cases, apply to the executive power in order that due notice of the initiation of the proceedings may be given through it to the interested States.

ARTICLE V.

Each one of the contracting States shall have the power to expel from its territory, under its own laws, the offenders who have taken shelter therein, if after having given notice to the State against which the refugee committed an extraditable offense no action is taken by it.

ARTICLE VI.

Acts done in the territory of a State which are not punishable according to its laws, but are punishable in the country where they produce their effects, shall not be made the subject of judicial action in the latter, except in case that the offender is found within its territory.

This rule shall be applicable also to those offenses which do not admit of extradition.

ARTICLE VII.

For the trial and punishment of the offenses committed by a member of a legation the rules of public international law shall be observed.

ARTICLE VIII.

Crimes and offenses committed on the high seas, or on neutral waters, either on board a man-of-war or a merchant vessel, shall be investigated and punished according to the laws of the State to which the flag of the vessel belongs.

ARTICLE IX.

Crimes and offenses committed on board a man-of-war when in the waters of a foreign nation shall be investigated and punished by the courts of the State to which the vessel belongs, and according to its own laws.

The same rule shall be applicable to offenses committed outside the vessels by members of the crew thereof, or by persons employed on board the same, if the said crimes or offenses affect only the law or rule of discipline in force at the vessel. But when the crimes or offenses herein referred to, committed outside the vessel, were so committed by persons not belonging to the ship's company, then the jurisdiction to try the offenders shall belong to the State in whose territorial waters the vessel may happen to find itself.

ARTICLE X.

Crimes and offenses committed on board a man-of-war, or on board a merchant vessel, under the circumstances of Article II, shall be investigated and punished as provided by that article.

ARTICLE XI.

Crimes and offenses committed on board a merchant vessel shall be investigated and punished according to the laws of the State in whose territorial waters the vessel happens to be found.

ARTICLE XII.

Territorial waters are declared to be, for the purposes of jurisdiction, those which are comprised in a belt five miles wide running along the coast, either of the mainland or of the islands which form part of the territory of each State.

ARTICLE XIII.

Acts of piracy, as defined by public international law, shall be subject to the jurisdiction of the State under the power of which the offenders may happen to fall.

ARTICLE XIV.

Criminal prosecutions shall be barred by the statute of limitations of the country having jurisdiction to punish the offense. The expulsion of offenders shall be also governed by the laws of the same country.

TITLE II.—*On Asylum.*

ARTICLE XV.

No offender who has taken refuge in the territory of a State shall be surrendered to the authorities of any other State except upon demand of extradition and according to the regular course of proceedings established for that purpose.

ARTICLE XVI.

The asylum is inviolable for political offenders; but the State has the duty of preventing refugees of this kind from accomplishing within its territory any acts whatever which may endanger the public peace of the nation against which the offense was committed.

ARTICLE XVII.

Such persons as may be charged with offenses of non-political character, and seek refuge in a legation, shall be surrendered to the local authorities by the head of the said legation, either at the request of the secretary of foreign relations, or by his own movement. But for political offenders seeking for shelter at a legation, the legation shall be an asylum, and shall be respected as such. The head of the legation, however, shall be bound to give immediately, to the Government of the State to which he is accredited, information of what has happened; and the said Government shall have the power to demand that the refugee be sent away from the national territory in the shortest possible time.

The head of the legation shall, in his turn, have the right to require the proper guarantees to be given for the exit of the offender without any injury to the inviolability of his person.

The same rule shall be applicable to the refugees on board a man-of-war in the territorial waters of the State.

ARTICLE XVIII.

The provisions of Article XV shall not be applicable to deserters from vessels of war while in the territorial waters of a State.

Said deserters, whatever their nationality may be, shall be surrendered by the local authorities, upon the proper identification, whenever the legation, or if there is no legation, the consular officer of the respective country may ask for it.

TITLE III—*Extradition.*

ARTICLE XIX.

Every nation shall be bound to deliver up to each other such offenders as have taken refuge within its territory, whenever the following circumstances shall occur, namely:

- (1) That the nation which asks for the delivery has competent jurisdiction to take cognizance and punish the offense with which the refugee is charged.
- (2) That the offense, owing to its nature or gravity, authorizes the extradition.
- (3) That the nation which demands the extradition has presented such documents as, under its own laws, authorizes the imprisonment and trial of the offender.
- (4) That the action against the offender has not been barred by the statute of limitations, under the laws of the country which makes the demand.
- (5) That the offender has not been punished for the same offense, and has not served his sentence.

ARTICLE XX.

The extradition shall be carried on in full, and in no case can it be hindered by the nationality of the offender.

ARTICLE XXI.

The offenses for which the extradition is warranted are the following:

- (1) As to non-convicted offenders, those offenses which under the laws of the country which demands the extradition are punishable with a maximum penalty not less than two years' imprisonment, or another equivalent.
- (2) As to convicted offenders, those offenses which are punishable with a maximum penalty of one year of imprisonment.

ARTICLE XXII.

No person shall be delivered up on extradition proceedings when the charge consists of any of the following offenses: Duel, adultery, libel, treason. But common, (non-political) offenses connected with any of the above named shall warrant the extradition of the offenders.

ARTICLE XXIII.

Political offenses, offenses attacking the internal or external safety of a State, or common offenses which are connected with them, shall not warrant the extradition.

The determination of the character of these offenses belongs to the nation upon which the demand of extradition is made; and that right shall be exercised under and according to the provisions of the law which should prove to be more favorable to the offender.

ARTICLE XXIV.

No civil or commercial action affecting the offender shall prevent the extradition from being accomplished.

ARTICLE XXV.

The extradition of the offender may be delayed as long as he may remain subject to the penal action of the State from whence he is asked; but the extradition proceedings shall not be interrupted for that reason.

ARTICLE XXVI.

Such offenders as may be delivered up on extradition proceedings, shall never be either tried or punished for political offenses, or for any acts connected with political offenses, previously committed.

But said offenders may be subject to trial and punishment in the country to which they were surrendered, upon consent of the State which surrendered them, for offenses which are extraditable which did not give foundation to the demand granted.

ARTICLE XXVII.

When the demands of extradition are several and are made for different offenses, the delivery shall be made to the nation against which the gravest offense was committed.

If the offenses are equally grave, then the delivery shall be made to the nation which first asked for it. But if all the demands are of the same date, the delivery shall be made according to the discretion of the Government which grants the extradition.

ARTICLE XXVIII.

If, after an offender is delivered up to a State, a new demand is made by another State for re-extradition, it shall be optional for the State which first granted the extradition to accede or not to the new demand, except in the case that the prisoner was set at liberty.

ARTICLE XXIX.

When the penalty for the offense with which the offender is charged is the penalty of death, the nation which grants the extradition may demand as a condition for the surrender the commutation of the sentence, and the imposition of the penalty next inferior in degree.

TITLE IV.—*Proceedings of extradition.*

ARTICLE XXX.

The demands of extradition shall be presented through the respective legations or consular offices, but if none has been established they shall be presented directly from Government to Government, and they shall be necessarily accompanied by the following documents:

(1) In cases of non-convicted offenders, by an authenticated copy of the statute, or provision of criminal law applicable to the offense on which the demand is based and of the warrant of arrest and other papers referred to in No. 3 of Article 19.

(2) In cases of convicted criminals, by an authenticated copy of the final sentence passed against the offender and the proper evidence that the condemned man was summoned and was either represented at the trial, or legally adjudged in *contumaciam*.

ARTICLE XXXI.

If the Government upon which the demand of extradition is made should deem the said demand to be unwarranted, owing to some defects of form, it shall return the papers to the Government which made it, with the proper explanation of the defects.

ARTICLE XXXII.

If the demand of extradition is made in due form, the Government upon which it is made shall transmit all the papers to the judge or tribunal of competent jurisdiction on the subject; and the said judge or tribunal shall order the arrest of the offender, if it is deemed proper, under the provisions of this treaty.

ARTICLE XXXIII.

Whenever, under the provisions of the present treaty, the arrest of the refugee is to be made, due notice shall be given to him, within the twenty-four hours next following to his arrest, of the causes and reasons for which he was arrested, and of the right which is vested in him under the following article.

ARTICLE XXXIV.

The prisoner shall be allowed, within the peremptory term of three days, to be counted from the date of his first examination, to object to his extradition on the following grounds:

- (1) That he is not the same man to whom the demand of extradition refers.
- (2) That the documents upon which the demand is based are not in due form.
- (3) That the extradition is not warranted.

ARTICLE XXXV.

Evidence in support of his statements, whenever such evidence may be necessary, shall be admitted; and this admission shall be governed by the same rules, as far as relevancy and time are concerned, as are in force in the country where the proceedings take place.

ARTICLE XXXVI.

After the whole evidence is on file, the judge or tribunal shall decide within ten days, and without any further steps, whether the extradition must or must not be granted.

An appeal can be taken against this decision to the court of final jurisdiction on the subject, within three days, and that court shall decide within five days.

ARTICLE XXXVII.

If the decision is in the sense that the extradition be granted, the tribunal which rendered it shall give notice thereof immediately to the executive power, in order that the proper provision be made by it for the delivery of the prisoner.

If the decision is averse to the extradition, the judge or tribunal shall order at once the release of the prisoner, and shall give due information to the executive power by sending to it a copy of its decision.

If extradition was refused because the documents were not sufficient, the case shall be re-opened whenever the Government whose demand was refused presents new documents, or supplements those which had been presented before.

ARTICLE XXXVIII.

Whenever the prisoner may acquiesce to his being delivered up, the court shall, upon entering in due form the said acquiescence, render a decision granting his extradition.

ARTICLE XXXIX.

Every article or object found in the possession of the offender, and having anything to do with the offense for which the extradition takes place, shall be delivered up together with the prisoner.

Those which were found in the possession of third parties shall not be delivered up without the possessor thereof having been first given the proper hearing, and a decision being rendered upon his statements.

ARTICLE XL.

When the extradition is to take place by land, the Government which delivers up the prisoner shall be bound to take the latter to the frontier, either of the State which makes the demand, or of the State through which he has to be carried.

When the extradition is to take place by water, whether of the sea or of a river, the prisoner shall be delivered up to the agents of the other nations at the port of embarkation.

The nation which asked for the extradition shall always have the right to send one or more police officers for the proper custody of the prisoner; but the functions and power of said officers shall be subordinate to and dependent upon the authority of the police of the country which has made the delivery.

ARTICLE XLI.

Whenever the extradition of a prisoner has been granted but the delivery can not be actually accomplished without passing through the territory of another State, the latter shall grant permission to do so, upon no other requisite or formality than the exhibition, diplomatically, of the decree by which the extradition was granted, and of which an authenticated copy shall be put on file.

If the permission is granted, the provisions of paragraph 3 of the foregoing article shall be complied with.

ARTICLE XLII.

The expenses which may be incurred, owing to the demand of extradition until the moment of the delivery, shall be paid by the State upon which the demand is made; but all others incurred after that moment shall be paid by the Government which made the demand.

ARTICLE XLIII.

Whenever the extradition is granted, and the offender delivered up is not a convicted criminal, the Government of the nation to which the said offender was delivered up, shall be bound to communicate to the Government which granted the extradition the decision which may be rendered in the case or trial for which it was granted.

TITLE V.—*Of the preventive arrest.*

ARTICLE XLIV.

In cases of urgency the State upon which the demand of extradition is made, shall order the preventive arrest of the offender, if so asked by mail or by telegraph, by the State which makes the demand, on condition, however, that a sentence, or a warrant of arrest, against the said offender is positively asserted to have been issued, and the nature of the offense with which he is charged is clearly stated and defined.

ARTICLE XLV.

The person so arrested shall be set at liberty if within ten days subsequent to the arrival of the first mail sent after the date of the petition for the preventive arrest no formal demand of extradition is made.

ARTICLE XLVI.

In all cases of preventive arrest the responsibility thereof belongs to the Government which asked for it.

General provisions.

ARTICLE XLVII.

No simultaneous ratification of this treaty by all the contracting States shall be necessary for its validity. The State which approves of the treaty shall communicate its approval thereof to the Governments of the Argentine Republic and of the Oriental Republic of Uruguay, which shall give notice thereof to the other contracting States. This process shall take the place of an exchange.

ARTICLE XLVIII.

The exchange having been made in the manner provided for in the preceding article, the treaty shall remain in force for an indefinite period of time.

ARTICLE XLIX.

If any of the contracting nations should deem it advisable to discontinue its adhesion to the treaty, or should desire to make some modifications of its provisions, it shall be in its power to do so: *Provided*, That it gives notice of its intention to do so to the other parties; but it shall not be released from its obligation until after two years have elapsed after the notice aforesaid was given by it; and in these two years it shall endeavor to reach some arrangement on the subject.

ARTICLE L.

The stipulations of this treaty shall be applicable only to offenses committed during the time in which it has been in operation.

ARTICLE LI

The provisions of Article XLVII are applicable to the nations which have not attended this Congress, but wish to adhere to this treaty.

INTERNATIONAL AMERICAN CONFERENCE.

REPORT AND RECOMMENDATIONS

CONCERNING AN

INTERNATIONAL AMERICAN BANK.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A letter of the Secretary of State relative to the report of the International American Conference in favor of an international American bank.

MAY 27, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives:

I transmit herewith a letter from the Secretary of State, inclosing a report adopted by the International American Conference, recently in session at this capital, recommending the establishment of an international American bank, with its principal offices in the city of New York and branches in the commercial centers of the several other American Republics.

The advantages of such an institution to the merchants of the United States engaged in trade with Central and South America and the purposes intended to be accomplished are fully set forth in the letter of the Secretary of State and the accompanying report. It is not proposed to involve the United States in any financial responsibility, but only to give to the proposed bank a corporate franchise and to promote public confidence by requiring that its condition and transactions shall be submitted to a scrutiny similar to that which is now exercised over our domestic banking system.

The subject is submitted for the consideration of Congress in the belief that it will be found possible to promote the end desired by legislation so guarded as to avoid all just criticism.

BENJ. HARRISON.

EXECUTIVE MANSION,
May 27, 1890.

DEPARTMENT OF STATE,
Washington, May 27, 1890.

The PRESIDENT:

I have the honor to submit herewith the report of the committee on banking as unanimously adopted by the International American Conference recently in session in this city. It was the wish of the Conference that this proposition, of such great interest to every American Republic, should, as promptly as possible, secure the earnest attention of the Congress of the United States.

The foreign commerce of the nations south of the Gulf of Mexico and the Rio Grande amounts annually to more than \$1,100,000,000. At present the people of the United States enjoy only a meager share of this market, but the action of the recent Conference will result, I believe, in the removal of certain obstacles which now tend to obstruct the expansion of our trade.

One of the most serious of these obstacles is the absence of a system of direct exchanges and credits, by reason of which the exporting and importing merchants of the United States engaged in commerce with Central and South America have been compelled to pay the bankers of London a tax upon every transaction. Last year our commerce with the countries south of us amounted to \$282,005,057, of which the imports of merchandise were valued at \$181,058,966 and the imports of specie and bullion were \$21,236,791, while our exports consisted of merchandise valued at \$71,938,181 and \$8,668,470 in specie and bullion. Of the merchandise imported into the United States the greater part was paid for by remittances to London and the cities of the continent to cover drafts against European letters of credit. For the use of these credits a commission of three-quarters of 1 per cent. is customarily paid, so that the European banks enjoyed a large profit upon our business with a minimum of risk. This system steadily results in losses to our merchants in interest and differences in exchange as well as in commissions. These losses would be largely reduced by the establishment of an international system of banking between the American Republics.

The merchants of this country are as dependent upon the bankers of Europe in their financial transactions with their American neighbors as they are upon the ship-owners of Great Britain for transportation facilities, and will continue to labor under these embarrassments until direct banking systems are established.

The report of the committee, hereto attached, presents a simple and easy method of relief, and the enactment of the measure recommended will, in the judgment of the Conference, result in the establishment of proper facilities for inter-American banking.

Respectfully submitted.

JAMES G. BLAINE.

REPORT OF THE COMMITTEE ON BANKING.

[As adopted by the Conference April 14, 1890.]

Pursuant to resolutions passed at the meeting of the Conference on December 7, 1889, your committee was appointed to consider and report upon the methods of improving and extending the banking and credit systems between the several countries represented in this Conference, and now has the honor to submit as the result of its deliberations the following report:

Your committee believes that there is no field of inquiry falling within the province of this Conference for the extension of the inter-American commerce more fundamentally important than that of international American banking, and that, in fact, the future of the commercial relations between North, South, and Central America will depend as largely upon the complete and prompt development of international banking facilities as upon any other single condition whatever.

In the opinion of your committee the question of the mechanism of exchange is secondary, if at all, only to the question of the mechanism

of transportation. Even after better means of transportation than those which exist shall have been established, it will be impossible for the commerce between American nations to be greatly enlarged unless there be supplied to their merchants means for conducting the banking business which shall in some measure liberate them from the practical monopoly of credit which is now held by the bankers of London and the European Continent.

If there be an enlargement of the means of transportation, unaccompanied with an equal extension of financial facilities, only partial benefits will be derived from the former as compared with the benefits which might be derived were the two improvements to progress together.

Your committee is of the opinion that the commerce between the American countries might be greatly extended if proper means could be found for facilitating direct exchanges between the money markets of the several countries represented in this Conference, even if there were no improvements in transportation.

The first effect would be to afford a more direct "clearance-in-account" of goods exported against goods imported.

The large amount of commissions now paid to the European bankers could not only be decreased, but such commissions would be paid to American bankers or merchants themselves, and in this way a share of the profits which now go almost solidly to the European money markets could be kept in the financial centers of this continent.

There does not exist to-day among the countries represented in this Conference any organized system of bankers' exchanges or credits; for instance, drafts upon the United States are not obtainable at all in many of the markets of South America, and in most of them are only salable at a discount below the sterling equivalent. In like manner drafts upon South and Central America are practically unknown in the money markets of New York, Philadelphia, Baltimore, New Orleans, Chicago, and Boston.

The point has been made that to extend business between our States *long credits must be given*. How is it possible for manufacturers and merchants at distant points to form relations of such a character as to justify the *granting of long credits*? At present such relations are chiefly formed through the intervention of European banks and bankers, which are not interested in the extension of trade between the different Countries represented in this Conference except in a secondary and subordinate sense. The extension of trade between Europe and the Americas, not between the Americas themselves, is their first care. By the establishment of a well-organized system of international American banking our merchants and manufacturers would be able to establish improved credit relations, and those administering the system in the several money markets of the Americas would immediately become interested in fostering such relations and facilitating such business to the utmost extent.

The merchants of the United States now importing goods from the countries of South and Central America make such importations, as the investigations of your committee show, almost without exception, through the use of English bankers' credits.

The total foreign commerce of the West Indies, Mexico, South and Central America amounted last year to about \$1,200,000,000 United States gold. The committee have not been able to ascertain the amount of the commerce among the Latin America States. The total exchange of commodities between the United States and countries to the South during the year ending June 30, 1888, aggregated \$282,902,408, of which the imports into the United States amounted to \$181,058,966 of mer-

chandise and \$21,236,791 of specie and bullion, and exports from the United States \$71,938,181 of merchandise and \$8,668,470 of specie and bullion. Of the \$181,000,000 of merchandise brought into the markets of the United States the greater part was paid for by remittance to London or the continent, to cover drafts drawn in the exporting markets against European letters of credit.

For the use of these credits on Europe a commission of three-quarters of one per cent. is customarily paid, and the foreign banks reap this great profit at a minimum of risk, inasmuch as the drafts drawn against these credits are secured not only by the goods represented by the shipping documents against which the bills of exchange are drawn, but also by the responsibility of the party (generally the consignee) for whose account the letters of credit are issued, and without any outlay of cash, as the American merchant places the cash with the European bankers to meet such drafts at or before maturity.

This system results in the loss to America of interest and differences in exchange as well as of commissions, all of which could be saved to our countries if international American banking were so developed and systematized as to afford a market for drafts drawn against letters of credit issued in America, such as now exists for drafts drawn against European letters of credit.

At present, therefore, the situation is such that the merchants of this continent are virtually dependent upon European bankers so far as financial exchanges are concerned, notwithstanding the fact that there are ample capital and responsibility in the countries here represented, and it is the opinion of competent persons that such capital would be ready to avail itself of the opportunity of transacting this business directly between the financial centers of our respective countries without the intervention of London if the laws were such as to permit the conduct of the business of international banking under as favorable provisions as are now enjoyed by the European bankers. The prime difference would be that these transactions would be carried on by American instead of European capital, and that the profit would remain here instead of going abroad. This, however, is impossible of realization at present, in view of the fact that the banking houses of the United States doing foreign business are usually controlled by London principals, and that it is impossible, without some change in the legislation of the United States to secure a sufficient aggregation of capital in corporate form, and so free from the burdensome restraints and taxes now imposed upon moneyed corporations as to permit competition on equal terms with the European bankers.

Many different plans have been discussed concerning the best means of facilitating direct banking business between our countries. Your committee has considered, and dismissed, a number of propositions relative to the establishment of banks by means of which the national governments themselves should afford financial facilities for inter-American banking. Such action, in your committee's judgment, does not fall within the proper sphere of government. There is no reason, however, why the Governments represented in this Conference should not severally charter banking corporations to carry on business of the class which is now generally done by the great banking corporations of London, that is, not in the issuing of circulating bank notes, but for the purchase and sale of bills of exchange, coin, bullion, advancing on commodities generally, and for the issuing of bankers' letters of credit to aid merchants in the transaction of their business.

In the United States, where capital exists in particularly large volume, and would lend itself most readily to business of this class, and

consequently to the *facilitating of international commerce, the laws are not such as to encourage the aggregation of capital for such purposes*. So far as your committee has been able to discover after careful investigation there is no general statute of the United States nor of any of the States of the United States under which a banking company can be organized with ample capital, which would have the power of issuing such letters of credit and transacting such business as is done by the leading banking companies of London, which virtually occupy the field. In the United States it will be necessary, in order to secure the proper facilities and the proper corporate existence, that there should be legislation granting a charter, and in most of the States such legislation is expressly prohibited by the terms of their constitution. Furthermore, the laws of the several States are such as to impose the severest restrictions upon moneyed corporations, and to subject them to taxation so heavy that it would render it impossible to carry on the business of international banking in successful competition with the English, French, and German bankers.

Your committee believes that the best means for facilitating the development of banking business, and generally of financial relations between the markets of North, South, and Central America, as well as for improving the mechanism of exchange without calling on any Government whatever to exceed its proper functions, would be the passage of a law by the United States incorporating an international American bank, with ample capital, with the privilege on the part of the citizens of the several countries in the conference to take shares in such bank pro rata to their foreign commerce; which bank should have no power to emit circulating bank notes, but which should have all other powers now enjoyed by the national banks of the United States as to deposit and discount, as well as all such powers as are now possessed by firms of private bankers in the matter of issuing letters of credit and making loans upon all classes of commodity, buying and selling bills of exchange, coin, bullion, and with power to indorse or guaranty against proper security, and generally to do whatever can already be done by the great banking firms who are carrying on their business without the aid of corporate charters under the laws of a general partnership. Your committee believes, upon well-founded information, that the capital to such a bank would be promptly subscribed.

The United States Government might and should reserve the largest visitorial powers. The business of such bank could be conducted with perfect safety and with profit to its shareholders and the greatest benefit to our international commerce. Branches or agencies of such a bank could be established in all of the principal financial centers of America, with the formal recognition of the Governments of the several States in which such agencies are established, or arrangements might be entered into with existing banking institutions of the other countries for transacting the business, thus at once affording markets throughout the two continents for the purchase and sale of bills of exchange, facilitating and improving credit conditions generally, and at once effecting a complete mechanism of exchange, such as already exists between our respective countries and the European money markets, but which has as yet no existence between the money markets of North, South, and Central America for the reason already stated.

One of the direct benefits to be derived by all of the Governments represented in the International American Conference from the establishment of such a bank would be that the investors in the several countries in different classes of American securities would have better means

than any which now exist for making such investments. For example, a South or Central American State about to float a foreign loan would feel itself less dependent upon a single combination or syndicate of European bankers than at present. There would be open to such borrowing State two markets to which to apply for national loans as against a single market to the mercy of which said borrowing Government is now virtually exposed. The same holds good as to all classes of State and municipal securities whatever. Latin-American investors would find means more readily at command for the investment in and investigation of all classes of North American securities, and the investors of the United States would also find means for the investigation of and in all classes of securities issued by the States, municipalities, or corporations of Latin America.

Your committee recognizes the fact that London has, for many years, derived the largest possible benefits through its banking facilities with our several States in taking all classes of American loans, which have generally proved themselves to be of most stable and desirable character, but, nevertheless, upon terms which have yielded the London bankers abnormally large profits simply because the element of competition does not exist by reason of the absence of proper banking relations between the several American countries. The institution of such a bank as proposed would at once afford relief against this state of affairs, and would be of benefit not only to the merchants in the manner described, but to all classes of investors generally and without distinction.

In recommending the organization of an International American Bank, the recommendation is based upon the present condition of trade. The establishment of better means of transportation and the promotion of trade in other ways will enlarge the demand for the class of facilities of a banking character which has already been referred to. The rapidly increasing wealth of North and South America also enhances the need for a complete system of inter-American exchange, and insures the subscriptions for an adequate capitalization to an International American Bank to meet such needs. As an evidence of this increase the valuation of the property of the United States in 1870 was estimated at thirty billions; in 1880, forty-three billions six hundred millions, being somewhat larger than the estimated value of the property of Great Britain at that time. The capital and business of the Americas is now much larger than when European facilities for banking between Europe and the Americas were established.

Banks of the character described, having agencies in the financial centers of the countries here represented, would materially promote the establishment and immediate use of a common standard for calculating values whenever such a standard shall be determined upon by the countries in interest.

While the sentiments of the independent nations of this continent are favorable to the settlement of all disputes by arbitration as expressed by resolutions introduced in this Conference, thus rendering war highly improbable if not impossible among them, there exists no such guaranty that war may not take place in Europe. In such event, as long as we remain solely dependent for our financial facilities upon European money centers, a complete demoralization of our credit facilities and our money markets would necessarily follow and cause financial disaster and distress, which would be considerably lessened, if not altogether avoided, were there a well-organized system of inter-American exchange.

It may be asked why can not the object sought for in this memorial be attained through the agency of a private bank. The answer is, that in the extension of inter-American trade it would be difficult, we might well say impossible, to impart either prestige or credit to a private bank. The establishment of an international bank by authority of Congress would promptly command from the other American Governments concurrent legislation which would provide the amplest and most trustworthy form of international co-operation. As neither the bank in the United States nor the branches that may be established elsewhere can have the power to issue circulating notes the most complete evidence is afforded in that fact that the bank is to be devoted solely to the commercial interests of the two continents and must rely for its profits upon the increase of the volume of business from which alone it can secure its profits.

After careful consideration your committee advises the adoption of the following resolution:

Resolved, That the Conference recommends to the Governments here represented the granting of liberal concessions to facilitate inter-American banking, and especially such as may be necessary for the establishment of an International American Bank, with branches or agencies in the several countries represented in this Conference.

J. M. HURTADO.

E. C. VARAS.

CHAS. R. FLINT.

SALVADOR DE MENDONÇA.

MANUEL ARAGON.

WASHINGTON, April 14, 1890.

INTERNATIONAL AMERICAN CONFERENCE.

ERECTION

OF

MEMORIAL TABLET.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A resolution of the International American Conference for the erection of a tablet to commemorate the meeting of that body.

JULY 16, 1890.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate and House of Representatives :

I transmit herewith a letter from the Secretary of State, inclosing a resolution adopted by the International American Conference, for the erection of a memorial tablet in the diplomatic chamber of the Department of State, to commemorate the meeting of that body.

BENJ. HARRISON.

EXECUTIVE MANSION,
Washington, July 15, 1890.

DEPARTMENT OF STATE,
Washington, July 15, 1890.

THE PRESIDENT:

I have the honor to inform you that the International American Conference, recently in session at this capital, before its final adjournment, adopted the following resolution, proposed by the Hon. Salvador de Mendonça, a delegate from the Republic of Brazil :

Resolved, That all delegations here present, the United States delegation included, vote and provide the means to place, with the necessary permission, on the walls of the room in the Department of State, in which were inaugurated our sessions, a bronze tablet, which shall contain, above the roll of the delegations, the following inscription in the four languages of this Conference:

The nations of North, South, and Central America resolve that it be commemorated that in this room, on the 2d day of October, of the year 1889, James G. Blaine, Secretary of State of the United States, presiding, were opened the sessions of the International American Conference, which, besides other measures destined to promote the union and welfare of the peoples of this continent, recommended to them as a guaranty of peace, the principle of obligatory arbitration.

Respectfully submitted.

JAMES G. BLAINE.



INTERNATIONAL AMERICAN CONFERENCE.

CELEBRATION

OF THE

FOURTH CENTENNIAL

OF THE

DISCOVERY OF AMERICA.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A resolution of the International American Conference relative to celebrating the discovery of America.

JULY 3, 1890.—Read, referred to the Select Committee on the Quadro-Centennial, and ordered to be printed.

EXECUTIVE MANSION,
Washington, July 2, 1890.

To the Senate and House of Representatives:

I transmit herewith for your information a letter from the Secretary of State, inclosing a copy of a resolution passed by the International American Conference, with reference to the celebration of the fourth centennial of the discovery of America.

BENJ. HARRISON.

DEPARTMENT OF STATE,
Washington, May 30, 1890.

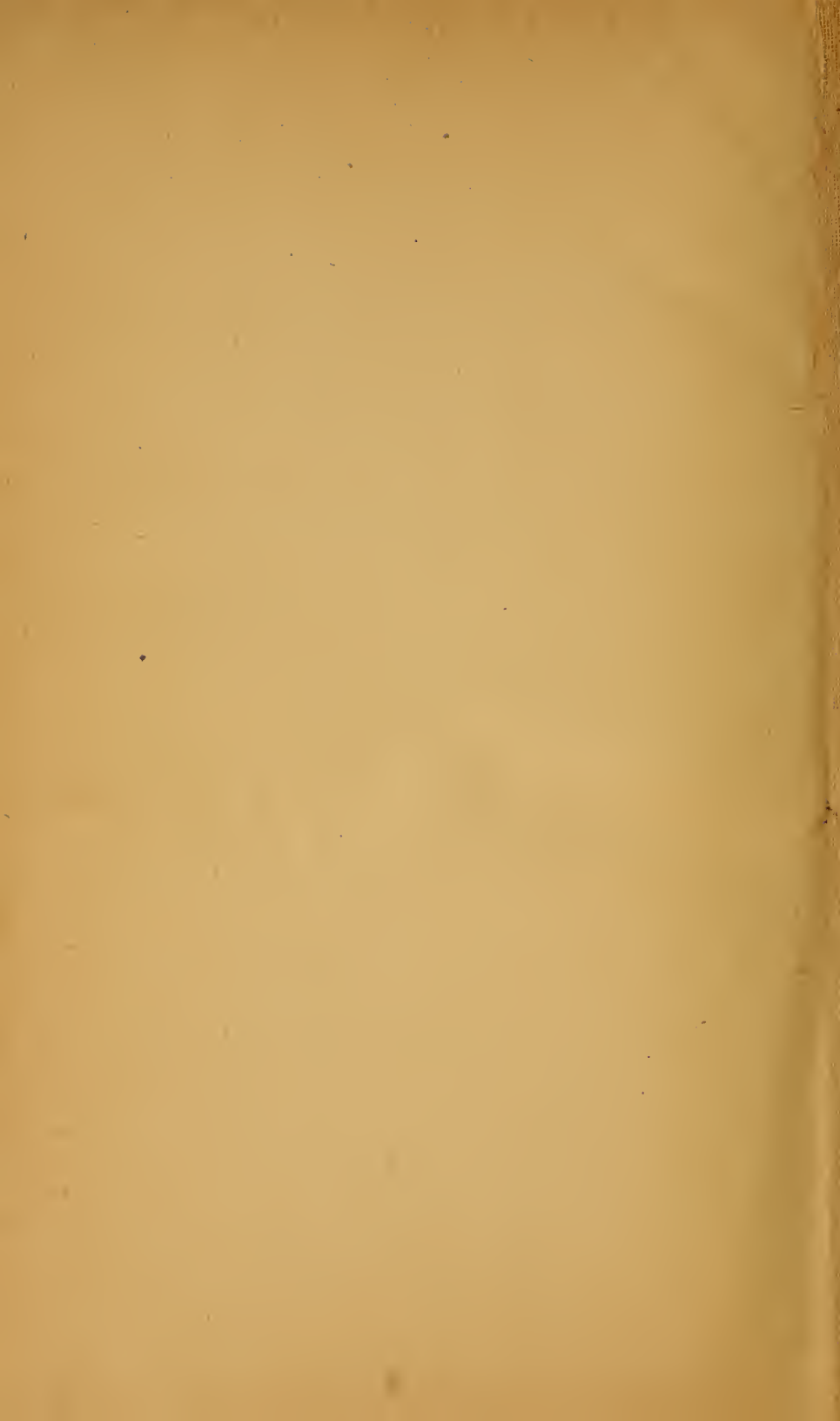
To the PRESIDENT:

I have the honor to transmit herewith, for your information, and that of the Congress of the United States, a copy of a resolution adopted by the International American Conference at its session of April 19 last:

Resolved, That in homage to the memory of the immortal discoverer of America, and in gratitude for the unparalleled service rendered by him to civilization and humanity, the International Conference hereby offers its hearty co-operation in the manifestations to be made in his honor on the occasion of the fourth centennial anniversary of the discovery of America.

Respectfully submitted.

JAMES G. BLAINE.







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